THE NATURE AND ROLE OF QUALITATIVE METHODOLOGY IN PSYCHOLOGY: A SCIENTIFIC REALIST PERSPECTIVE

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Abstract

Interest in qualitative research in psychology has never been stronger, but although qualitative research is making inroads into some areas of psychology, it is still marginalised within the discipline. Psychological researchers remain unconvinced as to the scientific worth of qualitative inquiry. This scepticism is due in good part to qualitative approaches not being accompanied by convincing arguments or demonstrations of their scientific adequacy. The aim of this thesis is to explore the possibility of a broader, scientifically credible role for qualitative inquiry in psychology. For this to occur, a scientifically credible basis for qualitative research needs to be established, or, if such a scientific basis already exists, made more apparent.

There are three barriers to overcome. First, qualitative writers argue that the key barrier to the broader use of qualitative inquiry in psychology is the domination of psychology by positivism/empiricism/postpositivism/realism. However, these writers generally misunderstand and conflate the nature of positivism, empiricism, postpositivism, and realism, because none of these metatheories exclude the use of qualitative methodology. Second, the real barrier to qualitative research in psychology is the 'quantitative imperative' (Michell, 1990), or the belief credible science must involve measurement. This barrier can also be removed by demonstrating that being non-quantitative is no restriction to being rigorously scientific. Third, an analysis of the history of the relationship between qualitative

inquiry and psychological science demonstrates the continuing lack of a broadly credible metatheoretical framework for qualitative approaches in psychology.

Of the metatheoretical positions that currently argue over the appropriate role of qualitative methodology in psychology, a specific form of scientific realism is favoured over radical social constructionism. Scientific realism offers qualitative researchers in psychology a scientifically credible metatheory that accepts mind-independence, epistemic realism, the correspondence theory of truth, methodism, but accepts a systematic fallibilism.

Chapter One

Introduction

1.1 The orienting argument

Interest in qualitative research in the social sciences has never been stronger. There are now hundreds of textbooks on qualitative research methods, at least fourteen academic journals dedicated to the promotion of qualitative inquiry, and extensive discussion of the role of qualitative research in psychology in the psychological literature (e.g., Azar, 1999; Banyard & Miller, 1998; Goldman, 1993; Henwood & Pidgeon, 1992; Kidd, 2002; Lee, Mitchell & Sablynski, 1999; Madill, Jordan & Shirley, 2000; O'Neill, 2002; Reicher, 2000; Rennie, Watson & Monteiro, 2000, 2002; Rogers, 2000; Tolman & Brydon, 2001)[1].

Despite this growing interest, qualitative research in Anglo-American psychology however is not a mainstream endeavour. Although the use of qualitative methodology in psychology is growing, it still occupies a marginal, specialist role. Qualitative oriented articles in mainstream psychology journals are uncommon (see Kidd, 2002; Krahn, Hohn & Kime, 1995; Munley et al., 2002; Rennie et al., 2002). Although, there has been a dramatic increase in published qualitative research since the 1980s this has occurred mainly in specialist qualitative journals (Rennie et al., 2002). The teaching of qualitative research in undergraduate or graduate psychology classes is also rare (Rennie et al., 2000; Smith, 1996; Stoppard, 2002). Some commentators have explored the supposition that a "paradigm shift [towards qualitative research in psychology] may be underway" (Rennie, et al., 2002, p. 179), but have concluded that most change in favour of qualitative research in psychology has occurred outside the mainstream. Institutional resistance to qualitative inquiry from quantitatively

[1] In contrast, qualitative approaches have long since become mainstream in social and cultural anthropology, sociology, education, geography, and nursing.

oriented psychologists is often noted (e.g., Guba & Lincoln, 1994, p. 106; Rennie et al., 2002, p. 179), although it is difficult to find clear evidence of the mainstream restricting qualitative practice in psychology[2], or even criticising qualitative practice.

Qualitative methodology is starting to make genuine inroads into some areas of psychology (Banyard & Miller, 1998; Kidd, 2002; Rennie et al., 2000), but most psychological researchers remain unconvinced about the scientific worth of qualitative inquiry. This scepticism is due in good part to the fact that qualitative approaches are not accompanied by convincing arguments or demonstrations of their scientific adequacy (Haig, 2002a). Qualitative research appears to lack a scientific warrant that is greater than the word of the qualitative researcher (Phillips, 2000). The justification of this scepticism, of course, depends on how 'scientifically adequate' is characterised. Qualitative psychologists have argued that science is too narrowly defined for qualitative research to achieve a broader role in psychology (Henwood & Pidgeon, 1992; Madill et al., 2000). In the qualitative literature, it is widely believed positivistic and/or empiricist metatheory (in which the qualitative writers can include postpositivism and realism, or both, in either positivism or empiricism) and quantification dominate psychologists' scientific views and form allied barriers to the expansion of qualitative practice (e.g., Guba & Lincoln, 1994). One obvious problem with this view is that positivism, empiricism, postpositivism, and realism cannot be lumped together as a single entity. Positivism and empiricism are antirealist in important respects (e.g., neither positivism nor empiricism accept mind independence). However, realism is often assumed to be underpinned by either empiricism or positivism and/or what is called 'postpositivism' where postpositivism is believed to be positivism "in its new postpositivistic clothes" (Guba, 1990, p. 21). Such

[2] Two recent papers that do provide some evidence for mainstream psychology acting to hinder qualitative research are Kidd (2002) and Stoppard (2002). Kidd (2002) demonstrates some editors of mainstream psychological journals are opposed to qualitative research on epistemological grounds, and that the APA manual guidelines for research strongly support a quantitative approach to research. Stoppard (2002) shows how a quantitatively oriented psychology department implicitly and explicitly opposed the teaching of qualitative methods.

positivistic characterisations of the metatheoretical opposition qualitative researchers face are erroneous. In large part, qualitative writers misunderstand the positions they rail against (Michell, 2003a). Positivism, empiricism, postpositivism, and realism are each highly diverse and controversial positions that share some attributes yet cannot be presented as a collective position. Although realism can be said to be a form of postpositivism, positivism and postpositivism are irreconcilable. For example, positivism, particularly logical positivism, relies on verification from sense experience. Postpositivism is a broad and ill-defined set of positions but it is reasonable to suggest that it is firmly antipositivistic in its acceptance of theoretical entities (Phillips, 1990). In the same vein, realism, diverse and controversial as it is, accepts that theoretical entities, amongst other things, can be independent of us. In this regard, positivism is antirealist.

The qualitative literature is typically mistaken in its views of what positivism, empiricism, and some forms of postpositivism, particularly realism, demand of qualitative research. Positivism, empiricism, naïve realism, and scientific realism, are metatheories that do not exclude qualitative practice. Naïve realism and scientific realism can be shown to offer a positive platform for qualitative research in psychology (Michell, 2003a). The real opposition to qualitative research in psychology is what Michell (1990) calls the 'quantitative imperative'. The quantitative imperative is the view that studying something scientifically means measuring it. Therefore, measurement is thought to be a necessary part of science and non-quantitative methods are considered prescientific (Michell, 2003a, pp. 6-7). Qualitative researchers have actively blamed psychologists' adherence to positivism, empiricism, and forms of postpositivism for their lack of reception in psychology, but it is the quantitative imperative that is the more significant barrier (Michell, 2003a). Belief in the quantitative imperative has an ancient but continuous history (Michell, 2003a), and the belief that the use of measurement equals good science runs deep in psychology. Qualitative research does not need to overcome positivism, empiricism, and realism to gain

broad entry into psychology. What it needs to demonstrate is that being non-quantitative is not a barrier to being rigorously scientific. Neither does qualitative research promote its cause by being anti-quantitative. An examination of the qualitative-quantitative debate reveals that the distinction between qualitative and quantitative methods is largely artificial and exaggerated.

Most psychological researchers continue to resist qualitative methodology in the face of vociferous advocacy from the 'qualitative industry' within social science (Schwandt, 2000, p. 190). Psychologists tend not to accept qualitative methodology as scientifically credible, or they assign it a minor role as an adjunct or preliminary to quantitative research. Being non-quantitative does not automatically make the research non-scientific, and there are current qualitative methods that already satisfy the criteria of validity and reliability involved in justifying knowledge claims. In psychology, these include grounded theory (Glaser & Strauss, 1967; Haig, 1996; Henwood & Pidgeon, 1992), verbal protocol analysis (Ericsson & Simon, 1984/1993; Green, 1995), and the theory of explanatory coherence (Thagard, 1989a, 1992).

Demonstrating that qualitative research can be scientific is only the first part of the argument for a broader role of qualitative inquiry in psychology. There is an equal need to supply qualitative research with scientifically credible metatheory. This metatheory needs to be able to accommodate both qualitative and quantitative methodology and be able to address the traditional criteria for justifying knowledge claims. If such a metatheory already exists, then it needs to be made more apparent. For much of the history of the relationship between qualitative research and psychology, qualitative inquiry lacked an explicit metatheory to facilitate its broader role in psychology. Now there are several metatheoretical positions that contribute to the debates over the appropriate role of qualitative methodology in psychology. These include many varieties of constructionism, of which a strong version of social constructionism will be considered in detail; critical theory (for example, Marxism and feminism); realism

in a number of forms; the participatory cooperative paradigm (Heron, 1996; Heron & Reason, 1997; Reason, 2003); and phenomenology. This thesis will argue for a specific form of scientific realism[3] to underpin qualitative research in psychology. The form of scientific realism that will be presented offers both a scientifically credible metatheory, employs the abductive theory of scientific method (Haig, 2002b), and a methodologically pluralistic approach. This form of scientific realism is proposed as a metatheoretical alternative to social constructionism, currently the preferred metatheoretical position for qualitative researchers.

At a broad level, the debates over the role of qualitative research in psychology can be represented as expressions of antirealism, often expressed as a form of constructionism. Although realists in a general sense are the majority in the philosophy of science, they are a minority in qualitative methodology. Social constructionists dominate the discussion of the role and direction of qualitative research in psychology. It is usual for these qualitative antirealists to depict a highly limited role, or even no role, for realist-oriented approaches employing qualitative methodology in psychology. Many qualitative antirealists see the rightful future of qualitative research as eclipsing postpositivist/realist qualitative research (Lincoln & Guba, 2000). For the qualitative antirealists, the onus is on psychology to broaden its conception of science. A key part of this antirealism is the rejection of what is perceived to be the overly rigorous validity criteria (Henwood & Pidgeon, 1994; Rennie, 1995). Rennie (1995) argues that subscription to the critieria of the natural sciences "threatens to undermine if not destroy what qualitative research has to offer social science" (p. 324), that is, the ability to research complex aspects of human life in a holistic manner.

A core belief of this thesis is that what people say, the insights they offer into their own behaviour, and the behaviour of others, can be valuable data, and can be

[3] Naïve, scientific, and critical realism have been cited as the main forms of realism in qualitative psychology (Madill et al., 2000), and naïve and critical realist views on qualitative research have been offered by a number of authors (e.g., Guba, 1990).

scientifically researched with or without measurement. The resistance to this type of data from psychological researchers combined with the quantitative imperative is in need of critical examination.

There are four parts to the argument in this thesis that qualitative research's marginal role in psychology can be overcome. First, to show positivism, postpositivism, and in particular, realism, are not exclusive of qualitative practice. In particular, forms of realism offer qualitative research a firm platform in psychology. Second, that the qualitative-quantitative divide is an artificial distinction that can be profitably bridged. Third, the scientific character of non-quantitative methods is demonstrated, particularly through the application of specific validity criteria to justify knowledge claims. Fourth, a form of scientific realism is proposed as a credible metatheory, which could facilitate a broader role for qualitative research in psychology. This form of scientific realism is argued to be superior to Kenneth Gergen's radical social constructionism, and Gergen and Gergen's (2000) application of this metatheory to qualitative research in psychology.

The following overview of chapters indicates how the four parts of the argument will be considered in the thesis.

1.2 Overview of the chapters

A first step in arguing for a broader role for qualitative research in psychology is to establish what qualitative inquiry is. Chapter two presents an analysis of how the published literature characterises qualitative research. Characterising qualitative research is highly contentious with many contradictory views and a continuing retrenchment of positions. Equally problematic is the fact that the metatheoretical positions underpinning qualitative approaches generally remain implicit, with qualitative researchers, like quantitative researchers, not being compelled to express their metatheoretical beliefs. Six approaches to conceiving qualitative inquiry are presented. Three alternative, supposedly antirealist,

characterisations of qualitative research are discussed, followed by qualitative realist and 'quantitative' perspectives on the nature of qualitative inquiry. The wisdom of avoiding defining qualitative research is also examined. A scientific realist characterisation of qualitative inquiry was not found in the published literature. Although there are dozens of different qualitative definitions, no unifying definition of qualitative research is established. Such a definition would be unhelpful in promoting a broader role for qualitative research in psychology because it would inevitably favour one of several contradictory metatheoretical positions. Instead, some very broad and pluralistic definitions of qualitative research are accepted as generally illustrative of qualitative research, albeit with an inherent and unproductive bias against realist qualitative inquiry (e.g., Denzin & Lincoln, 2000, p. 24).

Qualitative researchers typically define qualitative research by contrasting it with quantitative research. Qualitative writing is often characterised explicitly or implicitly in antirealist terms and focuses on the active rejection of what is seen as positivist, quantitative, or qualitative realist approaches (Denzin & Lincoln, 2000; Gergen & Gergen, 2000). Such characterisations of qualitative research do not promote qualitative research in psychology because they strongly favour an 'either or' choice of methodology, and fail to recognise the virtues of realist approaches to quantitative and qualitative research. An examination of the various characterisations shows there are prejudices on both sides of the qualitative and quantitative divide.

How qualitative and quantitative writers have come to this maladaptive methodological and metatheoretical situation in is explored in chapter three. This chapter provides a brief history of the relationship between qualitative research and psychology. Particular attention is paid to the misconception of positivism/empiricism/postpositivism/realism and how a quantitative resistance to qualitative research has formed in psychology. The history of the relationship between qualitative inquiry and psychological science underscores three key

points: First, that the metatheoretical and methodological gap between qualitative practice and mainstream psychology can, and has often been, overcome. Specifically, a characterisation of qualitative research that is not opposed to quantitative research is required. Second, the need qualitative writers have to present antirealist qualitative inquiry as the only alternative to quantitative positivistic or empiricist research is highlighted and can be shown to be both erroneous and unproductive. The quantitative imperative is the greater barrier, requiring a demonstration that non-quantitative data can be scientific. Third, the brief history of the relationship between psychological science and qualitative research shows there has been an apparent lack of a scientifically acceptable metatheoretical framework within which psychological researchers can use qualitative methodology, even though qualitative practice has always been part of psychology.

Chapter four directly examines the qualitative-quantitative debate (QQD). This is the controversy over the relative merits and scientific adequacy of quantitative or qualitative methodology and their associated metatheories. This is a longstanding methodological "paradigms war" (Gage, 1989, p. 4). Unusually for a war, it has regularly been pronounced finished (e.g., Patton, 1988; Patton 2002; Tashakkori & Teddlie, 1998), although the debate is far from resolved in psychology. An examination of this debate is important for understanding the potential of qualitative research to co-habit with quantitative research in psychology. However, the QQD is shown to be driven by misconceptions, prejudices, and a lack of awareness of what advantages the opposing side offers. An analysis of the character of qualitative and quantitative research demonstrates that the boundaries between the two approaches are highly blurred and often based on value decisions made by both qualitative and quantitative researchers. There is a reluctance to consider, even become aware of, the virtues of the opposing approaches. In particular, the qualitative understanding of positivism/empiricism/postpositivism/realism is often misinformed, whereas

quantitative researchers do not seem aware of the range of possibilities qualitative inquiry offers.

Chapter five examines whether qualitative data can be as valid and reliable as quantitative data. Qualitative research needs to demonstrate that being non-quantitative is not a barrier to being rigorously scientific. Three examples of qualitative method currently employed in psychology are examined. These methods are grounded theory (Glaser & Strauss, 1967), verbal protocol analysis (Ericsson & Simon, 1984/1993), and the theory of explanatory coherence (Thagard, 1989a, 1992). These methods are strikingly dissimilar in their character, the knowledge areas they investigate, the research traditions they have evolved from, and where within psychology they are, and can be, applied. However, all three methods successfully meet the traditional criteria of validity and reliability for justifying knowledge claims. The three methods also provide further bridges across the qualitative-quantitative divide because of their inclusive attitudes and procedures toward quantitative data.

The third concern to arise from the historical discussion in chapter three is the need for a scientifically sound metatheoretical position that is fair-minded about both qualitative and quantitative methodology. Chapters six and seven examine social constructionism and a form of scientific realism, respectively, as the two main postempiricist options available to psychological science. These two metatheoretical positions are evaluated on their ability to provide a scientifically credible epistemology and ontology, promote methodological pluralism, adhere to the traditional criteria of research evaluation, and promote a broader role for qualitative research in psychology. Chapter six specifically examines the influential and strong radical social constructionist position of Kenneth Gergen (1973, 1978, 1985, 1992a & b, 1994a, b, & c, 1999, 2001a, b, & c), and how this position applies to qualitative research (M. Gergen, 1992; Gergen & Gergen, 1983, 1984, 1986, 1991, 2000; M. Gergen, Chrisler & LoCicero, 1999). Ultimately, Kenneth Gergen's metatheoretical position is found to be inadequate,

and Kenneth Gergen and Mary Gergen's application of this metatheory to qualitative inquiry largely underdeveloped.

In chapter seven, a form of scientific realism to underpin qualitative research in psychology is set out in detail, based on specific doctrines: mind-independence, epistemic realism incorporating a systematic fallibilism and a collection of validity criteria, the correspondence theory of truth, and a strong commitment to methodism. The form of scientific realism proposed is based on the work of Hooker (1987), Phillips (2000), and Haig (1996, 2002a & b) but is also informed by overviews of scientific realism by Boyd (1984, 1996), Greenwood (1987, 1992, 1998), McMullin (1984), and Sankey (2000). Haig's (2002b) abductive theory of method also provides an important framework for qualitative inquiry in psychological science. Scientific realism is shown to offer a considerably more plausible and credible metatheory to support qualitative research in psychology than Gergen's radical social constructionism.

The overall conclusion is reached that this type of scientific realism supports some qualitative methods in psychology (e.g., grounded theory, verbal protocol analysis), while helping to make clear that other qualitative methods have yet to provide sufficient evidence of their ability to scientifically justify knowledge claims. The thesis provides a mandate for a limited number of qualitative methods, but the nature and achievement of those methods indicates the potential of qualitative research to contribute significantly to psychological science.

Chapter Two

What is Qualitative Research?

2.1 Overview

Chapter two examines the controversy over what constitutes qualitative research. It is a complex debate with no accepted resolution. The different intellectual traditions that populate the qualitative field have given rise to a number of metatheoretical stances that co-exist in a state of active disharmony. The aim in this chapter is to establish a wide-ranging characterisation of qualitative inquiry. This characterisation will provide a basis for understanding the broader potential of qualitative research in psychology, and its scientific warrant for making knowledge claims. It will also serve to introduce the question of how qualitative research relates to a variety of metatheories, including antirealism and realism. It will become apparent that the discussion of qualitative and quantitative research in the qualitative literature is strongly influenced by prejudices and confusions. In particular, qualitative researchers often present their approaches to qualitative inquiry as antipositivistic, and antiquantitative, whereas they are more accurately characterised as antirealist. Moreover, the antirealist characterisations of qualitative research can be strongly challenged partly based on the overlap between antirealism and realism, and qualitative and quantitative research.

The characterisations of qualitative inquiry given within, and outside of, psychology are considered in this chapter; although the emphasis is on the writings of qualitative psychologists, it is in the literature of related social sciences where the nature of qualitative research is most frequently discussed. Six distinct approaches to characterising qualitative inquiry are presented. First, three different, but supposedly antirealist approaches to understanding qualitative inquiry are examined. This is followed by an examination of an approach that avoids directly characterising qualitative research. A 'qualitative realist'

approach to understanding qualitative research is then discussed. The term 'qualitative realist' refers to qualitative writers who take some form of realist perspective on the nature of reality and on what constitutes warrantable knowledge. Lastly, there is consideration of what is labelled a 'quantitative' view of qualitative research. This view is based on what qualitative writers perceive as the quantitative understanding of qualitative inquiry, but it can be shown to be oversimplified and largely unsubstantiated.

2.2 Characterising qualitative research

Seeking a specific characterisation of qualitative research is of questionable value. Many qualitative authors believe that no coherent paradigm of qualitative research exists (Henwood & Pidgeon, 1994; Madill et al., 2000; Reicher, 2000), and therefore that no useful specific characterisation of qualitative inquiry is possible or desirable. Such a characterisation can only provide a limited conception of the diverse metatheoretical and methodological field of qualitative inquiry.

The large number of specific characterisations of qualitative research in the qualitative literature suggests many qualitative writers believe qualitative research has a specific nature. However, the inadequacy of these characterisations to offer an inclusive and meaningful representation of qualitative inquiry suggests otherwise. Where qualitative writers strive to provide precise characterisations, , generally in an effort to forward a particular metatheoretical or political view, they have given qualitative inquiry an impoverished characterisation.

Some qualitative writers argue fiercely that qualitative research is a distinct and definable paradigm (Denzin & Lincoln, 1994; Lincoln & Guba, 1985; Reason & Rowan, 1981). These authors offer multiple characterisations of the qualitative field. Their insistence on a separate qualitative paradigm is in part driven by their political agenda to promote qualitative research in the face of what they see as a

positivist and quantitative hegemony. Other authors argue that qualitative research is not inherently separate from quantitative research (e.g., Hammersley, 1992; Silverman, 2000). Between the positions of a distinct qualitative paradigm and no separate qualitative paradigm, there are a multitude of intertwined views on the nature of qualitative research. In this regard, Henwood (1996) likens the process of psychologists considering qualitative research to entering a maze (p. 39). Aside from Popper's argument for the rejection of definitions, the existence of a variety of intellectual origins, the current metatheoretical debate, and diversity of methods, aims, and applications within qualitative research all make an adequate unifying characterisation elusive.

There are literally dozens of different approaches to representing qualitative research, and the more closely these characterisations are studied, the greater the disagreement and confusion are evident. Most problematic is the habit of leaving metatheoretical influences on qualitative research unstated (Madill et al., 2000). There is also much confusion in qualitative methodology where the different, but related, concerns of metatheory, methodology, and method are run together. For example, a characterisations may include an ontological view and a specific method, but not an epistemological position or the relevant qualitative tradition by which the method is informed. Often methodology, method, and a qualitative tradition become inappropriately blurred in a characterisation . Even at a single level, for example the level of methods, there can be considerable ambiguity. Method may or may not include data collection or data analysis. For some, method is exclusively an interpretive strategy and does not include data collection (Giorgi, 1970; Glaser & Strauss, 1967; Moustakas, 1990). Others see method primarily as data collection (Bryman & Burgess, 1999; Denzin & Lincoln, 1994), or as a process that includes data collection, analysis, and interpretation (Morse, 1994; Silverman, 1993). Some authors even characterise qualitative research by a single method. For example, Girden (1996) declares, "Qualitative methods are ethnographic and take place in a natural setting" (p. 266).

What is clear is that characterisations of qualitative research often assume an antirealist perspective with writers in the qualitative literature frequently being unaware of this assumption. When qualitative writers argue vehemently against positivism, empiricism, and postpositivism, they are in fact more likely to be arguing against a form of naïve realism (Michell, 2003a). In contrast, relatively few qualitative methodologists argue in favour of a realist view of the nature and role of qualitative research. However, as will be discussed, the gap between antirealism and realism is sometimes not as large as is normally presumed. Typically, realism is associated with the idea that the world exists independently of us, and our efforts to know about it. Methodologically, realism is characterised in the qualitative literature as closely aligned with quantitative approaches and the need to be objective. Antirealism rejects mind-independence and is said to reject realism in all its forms. Very broadly speaking, antirealism holds that reality depends on our construction of it, that is, reality and the research process are mind dependent. Antirealism tends to be associated with qualitative research, constructionism, relativism, the importance of language in the construction of reality, and even the denial of reality. However, antirealism and realism both include a wide range of metatheoretical positions and values, many of which can be shown to overlap. This overlap is not well reflected in the qualitative literature, but will be regularly highlighted in this chapter.

Almost all qualitative writers recognise the problems involved in characterising qualitative research (e.g., Denzin & Lincoln, 1994; Schwandt, 1997). These problems do not prevent qualitative researchers, including those just referenced, from attempting specific characterisations . To avoid problems of specific characterisations , qualitative researchers employ one or more of the following six approaches to characterise qualitative inquiry. This is not a comprehensive list but it does provide a reasonable coverage of the discussion of the nature of qualitative research. The first three approaches are typically held to be antirealist, but in fact overlap somewhat with realist views. The fourth approach expresses the view that how some researchers believe it is wisest to avoid

specifically characterising qualitative research. This is followed by a qualitative realist characterisation of qualitative research, and finally a 'quantitative' view of qualitative research as portrayed in the qualitative literature by qualitative researchers. The list of approaches to characterising qualitative research is:

- Contrasting qualitative research with quantitative research
- Employing a list of key characteristics of qualitative research
- Specific characterisations of qualitative research
- Avoiding the speccific characterisation of qualitative research
- Qualitatively-oriented realist characterisations of qualitative research
- The quantitative view of qualitative research in the qualitative literature

The first three 'antirealist' approaches encapsulate the usual ways in which qualitative research is represented. These approaches can also be considered as indicators, or even conceptions, of the possible role and benefits of qualitative research in psychology. However, these antirealist characterisations are also the first of many examples of the artificiality of the distinctions between antirealism and realism and qualitative and quantitative research.

2.2.1 Three 'antirealist' approaches to characterising qualitative research

Contrasting qualitative research with quantitative research

The first and most common approach to defining qualitative inquiry is to contrast it with quantitative research (e.g., Flick, 2002; Smith, 2003a; Tolich & Davidson, 1999). Qualitative research has been and continues to be, characterised by what it is not, that is, non-quantitative (Silverman, 2001, p. 25). This approach raises problems for the role of qualitative research in psychology because it tends to characterise qualitative research as antirealist and quantitative research as positivist/realist. Qualitative inquiry is, therefore, characterisied as opposing a concern with measurement, prediction, control, causal relationships, and what is seen in the qualitative literature as 'quantitatively-oriented' metatheory, such as positivism, empiricism, and postpositivism, particularly in the form of realism. As

Slife and Williams (1995) suggest, "The thrust of qualitative methods is to reject the philosophical assumptions of traditional methods" (p. 199). However, this is a restrictive approach to defining qualitative inquiry. Qualitative research can and is conducted in order to predict and control (see Brink, 1991) and to investigate possible causal relationships (see Miles & Huberman, 1994), but only if it is able to fully justify its scientific warrant for making knowledge claims as both valid and reliable (Brink, 1991, p. 183). To position qualitative methodology against quantitative methodology reinforces the belief that qualitative research operates from a different metatheoretical position than quantitative research. The goals of such a characterisation appear to be both global and specific: the global goal is to assert qualitative research as a distinct methodological 'paradigm'; the specific goal is to promote qualitative research over quantitative approaches in particular research settings, and endeavours to establish qualitative inquiry's irrevocable right to be used in those settings. These are settings where a quantitative approach would fail to reveal the subjective meanings that research participants give their actions. For example, according to Strauss & Corbin (1990), "Qualitative methods can give the intricate details of phenomena that are difficult to convey with quantitative methods" (p. 19).

Quantitative methodology can struggle with the complexity of human phenomena, but this is not a reason to overlook its role in this regard. Quantitative methodology can offer advantages over qualitative research in different research settings, although this is seldom noted in the qualitative literature. There are recent attempts at characterising qualitative inquiry without immediate reference to quantitative research (e.g., Denzin & Lincoln, 2000; Willig, 2001). However, these definitional discussions tend to revert to the pattern of making self-promoting comparisons with quantitative methodology in order to advance the role of qualitative research. In psychology, the distinction between quantitative and qualitative methodology is widely employed. Qualitative methodology has only recently emerged in psychology, and given the discipline's emphasis on quantification, it would be both challenging and unusual

to characterise qualitative research without recourse to quantitative inquiry (Banister et al., 1994).

However, a suitably formulated distinction between qualitative and quantitative inquiry can have advantages. It allows the placement of issues of research practice and method within metatheoretical contexts and offers a format to consider the pros and cons of each approach (Henwood & Nicholson, 1995, p. 109). The argument that drawing a qualitative-quantitative distinction can be useful receives support from a wide variety of qualitative researchers. For example, Smith and Heshusius (1986), Hammersley (1989), Silverman (1993), and Denzin and Lincoln, (1994), all argue that the dichotomy of qualitative and quantitative research "has led to a greater diversity of approaches and methods along with a critical awareness of their relative strengths and weaknesses" (Henwood, 1996, pp. 29-30). However, Hammersley (1996) and Silverman (2001) also note the dangers of this dichotomy. The qualitative-quantitative divide, particularly when it is oversimplified, can be a negative influence on the development of methodological pluralism, establishing a broader role for qualitative research, and obtaining the benefits of, and developments in, quantitative research. The dichotomy can also foster an unhelpful taking of sides (Patton, 1990), and it can aid the belief that qualitative research and quantitative research are mutually exclusive (Sue, Kurasaki & Srinivasan, 1999). In the qualitative literature, there is certainly a strong degree of assumed separation between quantitative and qualitative methodology and their metatheoretical views. The method of using comparisons to develop theoretical and methodological arguments is strongly endorsed. However, the quantitative-qualitative dichotomy is a comparison that ultimately has a deleterious effect. The terms 'quantitative' and 'qualitative' promote an overemphasis on choosing between methodologies rather than deriving the methodology through addressing the research question from a clearly explicated metatheoretical position.

The qualitative-quantitative debate has had a greater impact on the characterising of qualitative research than any other debate within the qualitative literature. A closer examination of this debate in order to explore the potential of qualitative and quantitative approaches to co-habit in psychology will be undertaken in chapter four.

Employing a list of key characteristics of qualitative research

A second approach to overcoming the difficulties of characterising qualitative research is to present key features that characterise qualitative inquiry (e.g., Banister et al., 1994; Flick, 2002; Maxwell, 1996; Patton, 2002). The key features can be as many as twelve (Flick, 2002) or as few as one (Bryman, 1988). A comprehensive, but not exhaustive, list of key features is provided below. It is useful to compile such a list in order to examine the individual nature of the features; to compare these features briefly with mainstream psychological research practice; to highlight the prevailing 'antirealist' components of qualitative research; and lastly, to provide a useful background for many of the metatheoretical issues to be examined.

There are also four important qualifications that should be made about the list. First, the features are generally considered 'antirealist' in nature although they do not stem from a homogeneous metatheoretical position; antirealism is epistemologically and ontologically highly diverse. Second, the list contains what appears to be a number of strong postmodernist themes, though one should not overstate the influence of postmodernism in the qualitative field. Postmodernism is only one of a number of influences on qualitative research. It is certainly not solely responsible for the current rise in interest in qualitative research (Atkinson, Coffey & Delmont, 2001; Morse, 1999a). Third, some of these features could be collapsed (e.g., meaning, subjectivity, and reflexivity), and others considerably expanded (e.g., constructionism). Fourth, these features can and will be challenged from a scientific realist position, here, and in following chapters.

Overall, the list does highlight a sense of greater compatibility between the putative qualitative and quantitative 'paradigms', and between antirealism and realism than is often thought to be the case.

A list of some of the assumed antirealist characteristics of qualitative research from the qualitative literature

- The active rejection of positivism, empiricism, and postpositivism
- A focus on accessing 'meaning'
- A subjective epistemology is paramount
- The researcher is the primary instrument of qualitative research
- The importance of reflexivity
- A constructionist ontology is emphasised
- Qualitative approaches are better able to study phenomena that are too complex or otherwise inappropriate for quantitative methodologies
- The rejection of the traditional validity criteria of research evaluation in favour of the new qualitatively-oriented criteria
- The acceptance of the 'turn to language' or the 'turn to text'
- A preference for naturalistic and specific contexts using a flexible, emergent methodology
- A focus on inductive practice and the rejection of the hypothetico-deductive method of inquiry
- A commitment to using multiple methods and multiple interpretive practices
- Using qualitative research to build a better world

<u>The active rejection of positivism, empiricism, and postpositivism:</u> Many qualitative researchers consider part of the role of qualitative research is to argue against positivism, empiricism, and postpositivism, including realism (Denzin &

Lincoln, 2000, p. 8; Gergen & Gergen, 2000; Guba, 1990). The dominance of quantitative research and 'positivistic' metatheory is seen to form a hegemony that needs to be confronted and overcome if qualitative research is to prosper in psychology (Burman, 1997). Some of these authors recognise the current entrenchment of sides in the qualitative-quantitative debate, and argue for further debate and discussion (Gergen, 2001a; Woolgar, 1996), although others believe, "the controversies around foundationalism...are not likely to be resolved through dialogue between paradigm adherents" (Lincoln & Guba, 2000, p. 178). Caricatures of positivism, empiricism, and/or postpositivism are often used as rhetorical devices in order to present preferred metatheoretical and methodological alternatives in the qualitative literature. Gergen (2001a), a well-known advocate of postmodernism and radical social constructionism, recently conceded, "one might even say that much of the critique of modernism has been irresponsible. It has been too much content with bashing existing traditions and too little concerned with the repercussions" (p. 807). The virtues of positivism, empiricism, and postpositivism, particularly variants of realism, are rarely considered. The fact some forms of postpositivism can be argued to be not only tolerant but also productive for qualitative research is overlooked by most qualitative authors (Michell, 2003a). To philosophers of science, positivism is in fact a form of antirealism, but this point is seldom understood in the qualitative literature. The tolerance of positivism and postpositivism towards qualitative approaches is fully examined in chapter three, and supports the idea that the metatheoretical compatibility of qualitative research and forms of postpositivism research is considerable.

Schwandt (2000) goes so far as to suggest that qualitative inquiry is best understood as a reformist movement against positivism and quantification, although he supports a methodologically flexible and eclectic approach to research that does not discount a role for positivism or postpositivism in the social sciences. There are realist-oriented authors in the qualitative literature

who argue against the wholesale rejection of positivist, empiricist, and postpositivist-oriented qualitative research (e.g., Hammersley, 1992; Miles & Huberman, 1994), but they are the exception. It is hard to imagine mainstream psychology welcoming qualitative research if it brings with it arguments against postpositivism, specifically realism, and quantitative research. Although it is frustrating for qualitative researchers trying to promote qualitative practice in academic departments and governmental institutions that are strongly quantitatively oriented, the history of the qualitative-quantitative debate suggests that attacking quantitative methodology and its associated metatheory is an ineffective way to advance qualitative research in psychology.

A focus on accessing 'meaning': Arguably, the most commonly cited feature of qualitative research is its ability to access the subjective 'meaning' that people give their lives and experiences (Elliott, Fischer & Rennie, 1999; Maxwell, 1996; Weinberg, 2002). The term 'meaning' is employed by qualitative researchers to encompass whatever constitutes the view of those being researched. The meaning of the participants is often assumed to drive the ontological perspective of the research (assuming the qualitative researcher believes in 'reality'). It is stressed that the meaning participants give their social reality should not be contaminated by the meaning applied to that social reality by the researcher. It is typical for qualitative writers to make the point that the meanings they discern are not 'truths' but something with which to create further dialogue. An 'uncovering' of participants' meanings, not the creation of meaning by the researcher, is assumed by many to be the aim of qualitative research (Van Maanen, 1988). A 'weak' social constructionist would argue that the research participants generate socially constructed meanings. These meanings then interact with the researcher's own social construction of the participants' meanings. An implicit assumption of much qualitative inquiry is that meaning is there to be found in all human affairs. Qualitative access to meaning is distinguished from what is characterised as the 'quantitative process' where the researcher typically focuses

on the relationship between variables. Qualitative researchers are often portrayed as seeking meanings as opposed to explanations (Moustakas, 1994).

However, exploring the meanings research participants give their actions and attitudes can also be the focus of quantitative research. What is more, qualitative researchers do not usually restrict themselves to reporting the participants' subjective views without first interpreting them; they help to construct the participants' meanings.

A subjective epistemology is paramount: In qualitative research, the perspectives of the researcher, of the participants, and the socio-political context of both are typically considered inherently subjective and interactive (Denzin & Lincoln, 2000). Arguably, the most important aspect of these three elements is the subjective view of the participants. Pidgeon and Henwood (1997) suggest that

> If researchers are to be able to understand people's participation in the social world, they must therefore engage in close inspection of how that world is perceived through the eyes of the participants themselves – from their own social and phenomenological perspectives. (p. 251)

The notion of objectivity is severely attacked in the qualitative literature (e.g., Gergen, 2001a). Objectivity is considered impossible because subjectivity is considered impossible to avoid. Subjectivity is usually understood to exert a positive influence on the research process, because it enables the awareness of processes that influence the research and this creates opportunity to react to those influences. Objectivity is held as an unattainable ideal and therefore

pointless. Rubin (1981) clearly expresses this attitude as follows, "The quest should not be for the fools' gold of objectivity, but for the real gold of self-awareness. For it is not our subjectivity that entraps us, but our belief that somehow we are free of it" (p. 103). The acknowledgement of the inevitability of subjectivity is the beginning of the qualitative researchers' focus on subjectivity. It is not enough for qualitative researchers to acknowledge that subjectivity is an inescapable component of their research. Qualitative researchers should actively seek subjectivity throughout their research, and actively minimize its effect on the participants and the setting (Peshkin, 1988). Subjectivity is taken as something that will improve qualitative research (Lincoln, 1995, p. 283) if researchers manage their subjectivity appropriately. Achieving a critical and productive subjectivity is believed to require considerable training and experience (Bloom, 1996; Peshkin, 1985).

In the qualitative literature, there is strong support for a subjective epistemology (Nisbett, 1974). In the broader methodological and theoretical literature however, the objective-subjective debate is far from resolved (Phillips, 2000). This debate is not about how to secure objectivity or avoid subjectivity. Instead, it focuses on whether objectivity should exist as a research goal to strive for, and, if such a goal is not realistic, how subjectivity can best be negotiated. Psychological researchers typically stress the need for obtaining epistemological and ontological objectivity. This thesis maintains that the goal of avoiding potentially confounding biases while striving to maintain objectivity is still highly appropriate in qualitative research, even if it is difficult to achieve. Phillips (2000) argues that objectivity is a "regulative ideal that underlies all inquiry" (p. 114). Objectivity helps us strive for the best possible research, but "does not guarantee truth" (Phillips, 2000, p. 114). In effect, the rejection of the worth of objectivity leads to the acceptance of any standards of inquiry. If a personal or subjective analysis is taken as scientifically equal to an analysis based on extensive and painstaking research, it will undermines the worth of social science (Phillips, 2000, p. 123).

Neither objectivity nor subjectivity provides a clear route to the 'truth', but objectivity provides a better standard to follow in aspiring to achieve 'truth'. It is acknowledged that knowledge is fallible, and the best research or theory can always be reconsidered (Phillips, 1990).

The rejection of subjectivity is not meant as a criticism of all qualitative approaches (some of which can be said to be highly objective in the sense they employ painstaking validation and reliability procedures), but rather to stress the virtue of being objective in a qualitative setting. Qualitative and quantitative researchers typically share the view that there are no absolute truths, even though qualitative researchers often incorrectly argue that quantitative researchers believe "truth is absolute" (Guba & Lincoln, 1989, pp. 103-104). The scientific realist position adopted in this thesis does not deny that subjectivity plays a role in the production of knowledge, but rather that objectivity, for the reasons just stated, promotes a better goal for researchers to strive for. Research is inevitably value-laden, and the researcher's values can manifest themselves in many ways (Knorr-Cetina & Mulkay, 1983). The acceptance of the influence of values is not a genuine point of difference between qualitative and quantitative research (Reichardt & Rallis, 1994b). Similarly, the theory-ladenness of observation is also accepted by both qualitative researchers and quantitative researchers (e.g., Guba, 1990; Manicas & Secord, 1983), although some qualitative researchers argue that it is also a point of difference (Guba & Lincoln, 1989).

Lastly, objectivity does not only occur at the level of the individual researcher. The researcher exists in an objective 'culture', which is as important as the researcher's individual striving for objectivity. Popper (1976) encapsulates the typical postpositivist account of objectivity as a product of the critical tradition of objectivity, as follows:

> What may be described as scientific objectivity is based solely upon critical tradition which, despite resistance, often makes it possible to criticize a dominant dogma. To put it another way, the objectivity of science is not a matter of the individual scientists but rather the social result of their mutual criticism, of the friendly-hostile division of labour among scientists, of their cooperation and also of their competition. For this reason, it depends in part, upon a number of social and political circumstances which make criticism possible. (Popper, 1976, p. 95)

The researcher is the primary instrument of qualitative research: One of the most distinctive features of qualitative inquiry is the reliance on the researcher or researchers as the primary instrument of research (Merriam, 1988). This feature can allow qualitative approaches flexibility and sensitivity when gathering and interpreting data. The qualitative researcher is seen as central to all aspects of the research process, and qualitative researchers typically argue that people are the best means for researching other people. The human researcher is assumed to be the only instrument capable of gaining the appropriate insights. It is contended that no other instrument has the ability to adapt to the complex and reflexive nature of human participants. Qualitative antirealists recognise that the influence of the researcher must be continually acknowledged and allowed for (this demand for reflexivity is specifically discussed in the next section).

There is the ever-present potential for biases in the qualitative researcher's relationship with participants and in how the researcher seeks to elicit data, but the researcher usually cannot, and does not, wish to avoid interacting with the participants. Even if there is no direct contact with participants, observation and interpretation remain theory-laden. Better to be wholly subjective and allow for it

than lose the dynamic powers of the human researcher, it is argued. Ultimately, the quality and validity of the research are believed to be determined by the skill and experience of the researcher. From this position, each example of qualitative research could be said to be unique. Quantitative data collection procedures (e.g., questionnaires, inventories) are often rejected, or seen to be of secondary importance to qualitative data collection.

Much of the criticism of qualitative research stems from the fact that the researcher is taken to be the main provider of validity. Although the human researcher can be a valuable instrument of research, it is reasonable to demand of qualitative research that it adopts a source of research evaluation other than, or in addition to, the word of the researcher (Madill et al., 2000). The potential for human biases is substantial, particularly given the creative and 'intuitive' methodological processes some qualitative researchers employ[4]. The degree to which different qualitative schools attempt to overcome the problems of bias varies considerably. Some researchers argue that their subjectivity is a positive source of insight, equating their interpretations with art and not science (Eisner, 1981, p. 9; Finley & Knowles, 1995). Other qualitative approaches have developed rigorous and largely transparent procedures to overcome this criticism, for example, grounded theory and verbal protocol analysis. Grounded theory employs constant case comparison, theoretical memos, negative case analysis, theoretical sampling, and theoretical saturation, to help ensure the data is rigorously examined (Strauss, 1987; Strauss & Corbin, 1990, 1998). The main reliability procedure in verbal protocol analysis is in the coding of segments where the rate of inter-encoder reliability of two independent encoders is expected to exceed 80% (Green, 1998). Validity in verbal protocol analysis is based on ensuring participants verbalise their thoughts but do not interpret those thoughts as they are verbalised (Ericsson & Simon, 1993). As Phillips (2000) notes, no analytical procedures guarantee truth. However, qualitative

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[4] For example, the use of intuitive or felt knowledge is strongly advocated by some qualitative writers as the best way to understand multiple realities (Lincoln & Guba, 1985).

researchers need to work harder than experimenters to show the credibility of their results is based not just on the quality of the researcher's opinion but on the quality of the research methods employed to ensure that the research has been conducted objectively.

The importance of reflexivity: Closely related to the importance of subjectivity is the recognition of reflexivity. Reflexivity is seen as essential to the understanding and practice of qualitative research (Guba & Lincoln, 1981; Reason & Rowan, 1981). There is now a considerable literature on the topic, and like most methodological concepts, reflexivity has a variety of interpretations (Sullivan, 1999). The focus here is on methodological reflexivity, as opposed to ideological or ethnomethodological interpretations. Methodologically, reflexivity demands that the qualitative researcher be critically self-aware of his or her subjective interpretation of all parts of the research process. The influence of any participating agent should be incorporated into the research process, including any relevant aspect of the research setting. Schwandt (2001) expresses this view on reflexivity:

> Hence, reflexivity can be a means for critically inspecting the entire research process, including reflecting on the ways in which a field worker establishes a social network of informants and participants in a study and examining one's personal and theoretical commitments to determine how they serve as resources for generating particular data, for behaving in particular ways vis-à-vis respondents and participants, and for developing particular interventions. (p. 224)

The reflexive researcher is self-critical of his or her biases, research peccadilloes, and theoretical orientation, but also his or her ontology. The reflexive researcher

understands that the research process endeavours to represent the world but also is involved in the world (Schwandt, 2001), a position that is endorsed by scientific realism. The traditional detached and 'interventionist' style of the researcher is rejected as falsely objective (Brydon-Miller, 1997).

Psychology largely ignores the reflexive nature of its discipline, although the use and advocacy of reflexive inquiry is growing (e.g., Parker, 1994). Some qualitative realists take exception to what can be seen as the overuse of the reflexive perspective in qualitative research. Silverman (1997) criticises what he describes as journalistic attempts at authenticity using reflexive qualitative research in the guise of social science. He states that using an open-ended interview approach does not grant "The elevation of the experiential to the authentic" (p. 248). He suggests that, "A subtle confidence trick is being played in Romantic sociology's appeal to 'authenticity' and 'openness'" (p. 248). Qualitative research often prioritises creativity and reflexive self-expression over rigour and theoretical credibility. The application of rigorous social science can and should be distinct from less rigorous and philosophically indeterminate forms of investigation. However, reflexivity can still be very useful particularly when aiding researchers to be aware of biases and confounding influences from themselves and any other source. In chapter seven, a specific epistemic criterion of 'reflexivity' is proposed as part of a much broader collection of validity criteria to facilitate qualitative researchers' taking a formal account of the political influences and methodological developments in specific studies.

A constructionist ontology is emphasised: Broadly characterised , constructionism[5] is currently the dominant ontology in qualitative research and among psychologists employing qualitative methods. Within qualitative writing

[5] Constructionism also has many other meanings in other disciplines such as mathematics and logic (Schwandt, 2001).

constructionism is a label that has an extremely varied use but it is possible to discern two main constructionist groupings (Phillips, 2000; Schwandt, 2001). First, radical or psychological constructionism emphasises individual cognition and the processes of the inner construction of reality (Schwandt, 2001). Here knowledge cannot be obtained through the accurate representation of external reality, separate from the individual knower (von Glasersfeld, 1995). Second, social constructionism, in weak and strong versions emphasises social processes and interactions (Schwandt, 2001). Social constructionists argue that knowledge cannot directly represent reality, but seek to know how knowledge is constructed in specific linguistic and social contexts. Social constructionists emphasise language as a functional system that creates social reality through the process of social exchange and shared meanings (Gergen, 1985).

Strong or radical social constructionism can go as far as to deny any ontology at all (Gergen, 1994a). The social constructionist qualitative psychologists Pidgeon and Henwood (1997) contend that, "Knowledge is always a social production" (p. 245). Under the strong form of social constructionism, the researcher and researched can never elude their constructive histories, and experience cannot be directly described (Gergen, 1994a, 2001a). Such an epistemological commitment dictates that research is a co-construction of the researcher and the researched in a specific sociohistorical and linguistic context. Valuable knowledge, therefore, stems from a dialog based on shared experience (Gergen, 2001a). It is common for strong social constructionists to embrace qualitative inquiry as the natural methodological extension of their ontology and epistemology (e.g., Gergen, 2001a; Gergen & Gergen, 2000; Henwood, 1996), because it is assumed to promote subjectivity, reject the traditional validity criteria of knowledge claims, employ flexible, emergent research designs that can react and adapt to the research situation, promote the unrestricted 'voice' of the participants, and, closely study the nature of the participants' language and facilitate the expression of that language. The weaker version of social

constructionism this does not agree that everything is socially constructed, and does not deny an independent reality. This form of social constructionism tends to focus on specific social constructions such as 'adulthood', 'private property', and 'sexual orientation', demonstrating how each notion is sociohistorically dependent, though still real (Schwandt, 2001).

Within radical social constructionism, a relativist ontology and epistemology have become influential. Ontological relativism centres on the idea that "reality is determined by our language or conceptual scheme" (Schwandt, 2001, p. 225). Epistemological relativism argues that all ideas can only be explained relative to their context. Therefore, stated in its extreme form, metatheoretical relativism holds all aspects of research will need to be tailored to a specific context and the findings of research only apply to that context. However, many qualitative writers distance themselves from relativism (e.g., Schwandt, 2000). Relativism is usually rejected by psychologists as being self-refuting (Fletcher, 1995), or simply "futile" (Rennie, 1999, p. 4) in the sense that if all aspects of research are relative then one cannot evaluate any research. The case for relativism as part of a broader radical social constructionist metatheory for qualitative research in psychology is examined in chapter six.

While qualitative psychologists tend to adhere to a social constructionist ontology (Gergen, 2001a; Hayes, 1997; Henwood & Nicholson, 1995), and constructionism has certainly been discussed more than realism in psychology in recent years, psychological researchers are probably more likely to support some form of realist ontology. This thesis will consider a scientific realist ontology as part of its proposed metatheoretical platform to support qualitative research in psychology.

Qualitative approaches are better able to study phenomena that are too complex or otherwise inappropriate for quantitative methodologies: Advocates of qualitative methodology claim they can better access the individual's perspective through intensive interviewing and observation, as opposed to the 'distant', 'inferential' methods of quantitative methodology (Banister et al., 1994; Banyard & Miller, 1998; Flick, 2002). Qualitative researchers have the advantage of interacting with, and adapting to, the social world whereas quantitative researchers are believed to be removed from it. The empirical demands of the research question can also dictate the use of qualitative methodology. Complex and exceptional objects invite a qualitative approach (Smith, 1996). There is a need, "to design [qualitative] methods so open that they can do justice to the complexity of the object under study" (Flick, 2002, p. 5). In studies where small *N* is unavoidable, qualitative approaches can be of more use, because they will provide greater depth of study than quantitative approaches (Flick, 2002).

Qualitative research is well adapted to investigate complex human phenomena, about which quantitative approaches can be less sensitive (Manicas & Secord, 1983; Reichardt & Rallis, 1994a). However, quantitative methods are more appropriate than qualitative methods for other research questions, where for example, the incidence or prevalence of a disease in the general population needs to be established. Such arguments tend to perpetuate the current qualitative-quantitative debate rather than promote its resolution. The use of qualitative or quantitative methodologies in place of the other does not necessarily overcome the other approach's shortcomings, although qualitative or quantitative methods are better suited to certain research situations. It is a contention of this thesis that the focus should be on selecting the better of either qualitative or quantitative methods, or some complementary combination of both (Elliot, 1995), that is based on a clearly articulated metatheoretical position.

The rejection of the traditional validity criteria of research evaluation in favour of the new qualitatively-oriented criteria: Qualitative researchers generally believe that they require more appropriate criteria than the criteria of validity to justify their knowledge claims. There is a wide range of alternative criteria available (e.g., Elliott, Fischer & Rennie, 1999; Lincoln & Guba, 1985; Seale, 1999b). Henwood and Pidgeon's (1992) criteria, for example, are based on the "need for radically different means of evaluating [qualitative] research" (p. 105). Their new criteria include, keeping close to the data; the importance of fit; theory integrated at diverse levels of abstraction; reflexivity; documentation; theoretical sampling and negative case analysis; sensitivity to negotiated realities; and transferability. It is thought the unavoidably unreliable and reflexive human participants cannot freely express themselves and stay within the bounds of the traditional validity criteria. It is also thought that in psychology, the rigorous emphasis on the validity criteria can be seen to handicap thinking and discovery by preventing methods from adapting to changes or events in the conduct of research, or not allowing research participants the freedom to express themselves outside the research framework (Henwood & Pidgeon, 1994; Rennie, Phillips & Quartaro, 1988). In response to the perceived need for alternative ways of justifying knowledge claims there has been a profusion of new criteria. This is despite the fact that qualitative writers have generally failed to adequately say why they do not use the traditional validity criteria. However, the alternative criteria have had very little impact on mainstream psychology and no significant impact on qualitative research, with no single new system gaining sway (Seale, 1999a).

In the qualitative literature, it has also been proposed that specific criteria should relate to the specific metatheoretical position of the qualitative researcher (e.g., Henwood & Pidgeon, 1992; Madill et al., 2000). Madill et al (2000) suggests that the traditional criteria of research have a place but only when evaluating research that has either a naïve or scientific realist metatheory. This means judging different qualitative research projects by different criteria. However, unless

qualitative researchers can show how they can adhere to validity and reliability, the broader use of qualitative research in psychology is unlikely to occur. This thesis proposes a return to the traditional validity criteria for qualitative research (Morse, Barrett, Mayan, Olson & Spiers, 2002). The systems of alternative criteria that have been developed do not seem to satisfy qualitative or quantitative researchers. For example, the criterion of 'credibility' proposed by Lincoln and Guba (1985) is not an effective alternative, because it confuses truth with credibility and accepts any research account as potentially scientific (Phillips, 2000, pp. 181-182). Reliability and validity should not be rejected, for this assumes they are not relevant to qualitative research (Morse, 1999b). It is more productive to demonstrate that qualitative research findings can be reliable and valid. This argument is discussed in chapter five.

The acceptance of the 'turn to language' or the 'turn to text': The roles of language, and more generally discourse, in determining the construction of reality are strongly emphasised in qualitative practice (Gergen, 1992a, 1994b). The emphasis on discourse, or text and language, reflects the influences of poststructuralism and postmodernism on these practices. 'Postmodernism' and 'poststructuralism' are labels for a variety of metatheoretical views. However, both positions clearly reject the realist notions of an objective and mind-independent world (Vollmer, 2000). These positions claim it is not possible to access the personal knowledge of the research participants directly (Gergen, 2001a; Kvale, 1992). Language and text are the units of reality for poststructuralists and postmodernists, and they afford numerous alternative interpretations of reality. Reality is socially constructed, meaning is negotiated, and 'conversations' are carried out between the researcher and the research participants to construct research findings (Kvale, 1992). All social phenomena are text (Woolgar, 1988a). A strong interest in a discursive approach (Burman & Parker, 1993; Potter & Wetherell, 1995), including narrative analysis (Gergen & Gergen, 1984; Murray, 1997) and conversation analysis (Drew, 2003; Drew &

Heritage; 1992), accompanies, and has helped facilitate, the turn to language or text.

The turn to language has received strong criticism from both qualitative realists and quantitative researchers (Hammersley, 1996; Krueger, 2002; Vollmer, 2000). The focus on language has been seen as taking psychology further away from science and empirical methodology (Snow & Morrill, 1995), and can even be seen as futile for science (Popper, 1962). This issue is discussed in greater detail in chapter six.

A preference for naturalistic and specific contexts using a flexible, emergent methodology: This feature maintains that in qualitative research the subject matter under study needs to be approached in its natural surroundings within a particular context[6] to ensure that the data accurately reflect the views of the participants (Bryman, 1988; Lincoln & Guba, 1985; Maxwell, 1996). Relatedly, the researcher should not control or 'manipulate' the research setting. Van Maanen (1983) suggests that

> Qualitative research is interested in everyday activity as defined, enacted, smoothed, and made problematic by persons going about their normal routines. Whatever interrupts or otherwise disturbs or distorts ordinary lines of action is to be minimized. (p. 199)

[6] The need to ground the research data in a specific identifiable context is often called contextualism. Contextualism is sometimes confused with holism, which is a much broader and diverse concept. Holism is the view that social phenomena are best studied as wholes (Schwandt, 2001). For example, an organisation would be studied in its entirety, including all of its individual properties (see Phillips, 1977).

Localised, context-specific theory development is preferred, even considered critical, to the validity of qualitative research (Weinberg, 2002). To study the research question outside its context would be to disturb the contextual meaning (Tolman & Bryon-Miller, 1997). Denzin and Lincoln (2000) argue that all settings are natural because they are "places where everyday experiences take place. The [research] site is constituted through the researcher's interpretive practices" (p. 24). This point is concisely expressed in negative terms by saying there are no artificial settings. A commitment to such context sensitivity is often accompanied by the rejection of generalizing from the context and a focus on the 'particulars' of the study (Creswell, 1994; Patton, 1990). It is a priority of qualitative studies to reflect the particular features of the research context. The particulars can only be 'true' of the specific context. However, most qualitative authors attempt some form of generalisation from their findings (Morse, 1999c). Morse (1999c) argues that qualitative research can also provide generalizable findings, although not in the same sense as quantitative research. For example, in grounded theory, qualitative research generalises from a theoretically selected sample. It is the nature of the sample, deliberately developed to help the theory emerge, that ensures the theory is "comprehensive, complete, saturated, and accounts for negative cases" (Morse, 1999c, p. 5). The grounded theory can then be applied beyond the sample to similar issues, problems, and situations. Corbin & Strauss (1990) make a similar point about grounded theory. They argue, "The more abstract the concepts, especially the core category, the wider the theory's applicability" (p. 15).

As part of being 'true' to the research context, the qualitative researchers often employ a flexible research design that can be adapted to the research setting (Patton, 2002). It is expected that the qualitative researcher can adapt to unforeseen circumstances and pursue the line of best inquiry. Often the most appropriate research design will emanate from the needs of the research once it is underway (Guba, 1981). Qualitative researchers tend to support research

designs that contain the potential for flexibility in data collection, data analysis, and the revision of the research questions.

The use of naturalistic designs and flexible methodology are not normally part of psychological research. The inability to demonstrate experimental control is thought to invalidate research findings, while the use of flexible methodology can be considered tantamount to cheating. Psychological studies usually require clearly specified hypotheses, the description of the measurement procedures, and decisions about the subsequent processes of analysis before any data collection begins. Some degree of flexibility in experimental design to adjust measurement procedures following data collection is permitted but in essence, everything is pre-planned. However, quantitative researchers are not unconcerned with context. Laboratory experimentalists are very concerned with context to ensure conditions are replicable and to control confounding variables (Sechrest & Sidani, 1995). In non-experimental settings, the development of multivariate statistics (e.g., structural equation modelling, regression-discontinuity designs) allows quantitative researchers to better encapsulate contextual factors (Sechrest, 1992).

A focus on inductive practice and the rejection of the hypothetico-deductive method of inquiry: An inductive approach to method is privileged over the hypothetico-deductive method in qualitative research (Hammersley, 1992). The researcher 'listens' to the data without the strictures and expectations of predetermined hypotheses and categories. When immersed in the data without such constraints, the researcher can better discover key themes and relationships. The researcher sifts through data from specific cases and builds towards overall findings. Theory and hypotheses grow out of the data facilitating an open exploration of phenomena. Induction is a productive, creative,

hypothesis-generating process and can be contrasted with the hypothesis testing of pre-existing theories common in quantitative approaches (Silverman, 2000).

This is an oversimplified and incomplete account of qualitative researchers' use of induction and rejection of hypothetico-deduction. While qualitative approaches seek to avoid a hypothetico-deductive approach to research, they are not always inductive in character, just as quantitative approaches, in particular statistics and probability theory, can give expression to an inductive approach. Qualitative researchers consistently speak against the hypothetico-deductive method, but in practice they generally use a combination of deductive and inductive approaches (Schwandt, 2001, p. 125). Nor are quantitative researchers solely concerned with a hypothetico-deductive approach. Quantitative research can be hypothesis generating, for example exploratory factor analysis, and social surveys can just be descriptive (Hammersley, 1996). Quantitative psychological researchers can also use a combination of deductive and inductive approaches, and abductive explanations (Ward, Vertue & Haig, 1999). Abductive reasoning potentially has a much greater role in both qualitative and quantitative research than is currently the case. Rennie (1999) argues that qualitative research should adopt a symbiosis of inductive and abductive reasoning. The combination of induction and abduction potentially offers resources for the internal validation of qualitative inquiry, thereby making qualitative research more acceptable to mainstream psychology (Rennie, 1999, p. 11).

It is possible to apply abduction far more broadly to qualitative and quantitative research in the form of a general theory of abductive method (Haig, 1996, 2002a & b, 2003; Ward & Haig, 1997; Ward et al., 1999). It is important to note that Haig's abductive theory of scientific method is underpinned by a scientific realist philosophy of science. Based on the scientific realist metatheory, the abductive theory of scientific method offers a more complete scientific framework within

which researchers can undertake research. This abductive framework can incorporate the processes of induction and hypothetico-deduction and allows for the use of abductive reasoning to promote the construction of explanatory theory. The inductive and hypothetico-deductive approaches do not allow for the application of the three forms of reasoning, and therefore have a more limited role in research. The abductive theory of scientific method incorporates inductive generalisations to explain the movement from data (comprising single pieces of observed information) to the detection of phenomena (i.e., relatively stable and recurrent patterns). Abductive reasoning is then applied to infer causal mechanisms that underpin the phenomena. The abductive framework still allows for the hypothetico-deductive testing of hypotheses where appropriate to assess the theory's empirical worth. However, the abductive appraisal of theories through inference to the best explanation is strongly recommended.

A commitment to using multiple methods and multiple interpretive practices: Qualitative writers often note that there is no one best qualitative method (e.g., Denzin & Lincoln, 1994; Flick, 2002). Qualitative approaches to research typically use multiple methods and interpretive practices (Banister et al., 1994; Denzin & Lincoln, 2000). The highly diverse sets of options include ethnography, grounded theory, narrative methods, and case studies amongst many others. Within the methodological strategies a range of individual methods of data collection and data analysis are employed. For example, within a grounded theory strategy, interviews, focus groups, and observational research can be used in conjunction with conversation and constant comparison analysis. The use of two or more qualitative methods to investigate the same research question is referred to as methodological triangulation (Denzin, 1970) and is held to be a strong form of validation in the qualitative literature (Flick, 2002). The use of triangulated methods is seen as a way to cover the weaknesses involved in using only one method. The strategy of triangulation can apply to the use of data

collection or analysis methods, in-group techniques, researchers, or even the application of multiple theories.

Approaching a research question via two different data collection methods will normally lead to a fuller understanding of the phenomenon under study. Although methodological pluralism is to be valued, the application of multiple method strategies can create as many problems as they solve. If contradictory findings emerge from different qualitative approaches, or from a combination of qualitative and quantitative approaches, how are the results to be evaluated or compared? Qualitative and quantitative approaches do not share agreed upon evaluation criteria. The use of multiple methods potentially complicates the interpretation of research findings if the findings from individual methods differ. The same argument applies to mixing qualitative and quantitative methodology. Rather than validate each other, the qualitative and quantitative methodologies may be contradictory and create, rather than resolve, confusion.

Using qualitative research to build a better world: Some qualitative psychologists argue that psychologists should take an active part in the ideological arguments over knowledge production (Griffin & Phoenix, 1994; Prilleltensky, 1994; Reason & Rowan, 1981; Weisenfeld, 2000), and that qualitative researchers should act to foster social progress and provide a voice for minority groups (Banister et al., 1994; Tolman & Brydon-Miller, 1997). This socially progressive role is often given as a key reason for the promotion and adoption of qualitative methodology (Gergen & Gergen, 2000; Reason & Rowan, 1981). Ontological and epistemological developments in qualitative research are strongly allied with political and moral attitudes about how and why research should be conducted. It is commonly argued that most qualitative researchers want to make the world a better place through their research (Weisenfeld, 2000). The potentially flexible, emic, and subjective, role of the qualitative researcher that focuses on the

participants' view of the social world is believed to have the potential to be substantially more empowering than quantitative, etic, and 'objective' research.

In parts of the qualitative literature, the moral and/or the political have become more important than the scientific. This view is epitomised by Reason's (1993) labelling of qualitative research as a "sacred science"[7] (p. 10). However, such labels do not advance the role of qualitative research but instead mystify it by introducing a term that could be interpreted as a semi-religious and vague. Neither Denzin and Lincoln nor Reason fully characterise what they mean by 'sacred', although the implication from their writing is that qualitative research occupies the moral high ground. Snow and Morrill (1995) note in their critique of Denzin and Lincoln's (1994) highly moral argument for qualitative research that, "there is little to be gained and much to be lost by making moral claims and engaging in moral posturing" (p. 362). Quantitative researchers are regularly accused of avoiding the moral arguments involved in the debate over the proper role of qualitative and quantitative research (Denzin & Lincoln, 2000, p. 8). The moral dimension to the methodological debates has not yet helped to clarify the role of qualitative research in psychology, which is not to say moral arguments lack relevancy. Both Schwandt (2002) and Harré (1986) argue that the clarification of the moral nature of scientific communities is highly important to resolving many issues in metatheory and methodology. Moreover, psychological and qualitative researchers are loath to neglect the social responsibilities of their work. In presenting her view that the qualitative research genre can be usefully located in action research praxis and the hermeneutical tradition, Hoshmand (1999) asserts that,

[7] The expression 'sacred science' although originating with Bateson (1972) has been popularised first by Reason (1993) and then by Denzin and Lincoln (1994) and Lincoln and Denzin (2000), more particularly as 'the sacred epistemology' or 'sacred discourse' (Lincoln & Denzin, 2000, p. 1052).

> The value of a given form of knowledge is to be gauged by its contribution to knowledge, as well as by its socio-political role and cultural relevance. The qualitative research genre can be located in the communities and practices with which it is associated and can be evaluated by the shared purposes and values that inform such practices and their future agendas. (p. 15)

Hoshmand's claim is an apt perspective on the moral role of any research.

Specific characterisations of qualitative research

A third approach to characterising qualitative research is to provide a specific characterisation (e.g., Denzin & Lincoln, 1994, 2000; Elliot et al., 1999; Patton, 2002; Schwandt, 1997), or employ another author's particular characterisation (e.g., Mertens, 1998; Newman & Benz, 1998). Such characterisations , or use of characterisations , are normally recognised for the oversimplifications they can introduce, for example, the impossibility of their characterising all qualitative inquiry. However, authors generate specific characterisations in any case. Inevitably, these characterisations represent a particular metatheoretical view, which is usually antipositivist and antirealist. Although there are many attempts to characterise qualitative research, a good example of the nature of specific qualitative characterisations is Denzin and Lincoln's (1994) statement:

> Qualitative research is multimethod in focus, involving an interpretative, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experience, introspective, life story, interview, observational, historical, interactional, and visual texts – that describe routine and problematic moments and meanings in individuals' lives. (p. 2)

This specific characteriation is strongly biased towards a postmodern constructionist view of qualitative inquiry, but in the absence of alternatives, and the high profile of Denzin and Lincoln's work, it appears to be the default 'definition' preferred by a good number of qualitative researchers. Denzin and Lincoln's second edition of the Handbook of Qualitative Research (2000), as well as being the culmination of qualitative research for postmodern constructionists, is an extended attempt to specifically characterise qualitative research. Denzin and Lincoln (2000) provide a number of characterisations of qualitative research, arguing that qualitative inquiry "is a field of inquiry in its own right" (p. 2). This is a position that has been maintained by certain qualitative writers for some time (Lincoln & Guba, 1985; Reason & Rowan, 1981), and allows specific characterisations of qualitative research to be made.

There are of course many different types of qualitative characterisations , and dozens of examples that could be considered. Some definitions are simple, others complex, and many are politically or morally oriented. An apparently simple characterisation comes from Kirk and Miller (1986) who state that, "Qualitative research has been seen to be naturalistic, ethnographic, and participatory" (p. 9). These three attributes are common in characterisations of qualitative research but they are not necessarily compatible and could be held to represent three different levels of qualitative research: naturalism as a metatheory, the research tradition of ethnography, and one form of the participatory research method. Similarly, naturalistic could be an attribute of the method, participatory could relate to the participatory metatheory, and ethnography could inform just the method. Naturalistic approaches and ethnographic approaches can also have significant points of conflict. The conflict relates to the level of involvement of the researcher in the research process. Naturalism would favour the most limited involvement whereas ethnography tends to favour deep involvement.

An example of a relatively complex characteriation of qualitative research comes from Creswell (1998):

> Qualitative research is an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting, based on distinct methodologies within traditions of inquiry. (p. 15)

Creswell characterises qualitative research in terms of distinct traditions and methodologies. Qualitative research is a methodological process, although Creswell does not mention a specific data collection method. Several traditions operate independently but all provide an evolution of thinking that informs their current methodological practices. It is more accurate to suggest that while the traditions can, and often do, operate independently, there is also considerable overlap between them. The different traditions are not unaware of each other and can compete, sometimes with overt rancour. Creswell's characterisation also includes a series of specific attributes, including both ethnography and naturalism, but its greatest emphasis is on holism.

An example of a politically oriented definition of qualitative research is provided by Denzin and Lincoln (2000), who write "Its [qualitative research] essence is twofold: a commitment to some version of the naturalistic interpretative approach to its subject matter and an ongoing critique of the politics and methods of postpositivism" (p. 10). Following this characterisation , postpositivist researchers employing qualitative methods would find themselves in a dilemma over whether to criticize themselves before or after conducting qualitative

research. Such characterisations are unhelpful. They demonstrate the tendency of postmodern constructionists to conflate political opinions with epistemological debate (Flick, 2001; Hammersley, 1996; Silverman, 2001).

Schwandt (1997), in the preface to the Dictionary of Qualitative Inquiry (1st edition), offers the following less biased, but extremely broad, characterisation of qualitative research:

> Qualitative inquiry...is a set of multiple practices in which words in methodological and philosophical vocabularies acquire different meanings in their use or in particular acts of speaking about the meaning of the practice. The different ways of speaking form something more like a constellation of contested practices than an integrated, readily surveyable order. There are multiple sources and kinds of disputes, but generally they involve different ways of conceiving of the aim of qualitative inquiry stemming from different traditions of thought. (p. xxiv)

This characterisation is very open-minded about what qualitative research could be it and provides little insight into what qualitative research actually is, although Schwandt does introduce this characterisation as an analogy and not a definition.

An example of a broad pluralistic characterisation of qualitative research that aims to encapsulate all of qualitative research comes from Denzin and Lincoln's (2000) paraphrase of Nelson, Treichler and Grossberg's (1992, p. 4) characterisation of cultural studies:

> Qualitative research is an interdisciplinary, transdisciplinary, and sometimes counterdisciplinary field. It crosscuts the humanities and the social physical sciences. Qualitative research is many things at the same time. It is multiparadigmatic in focus. Its practitioners are sensitive to the value of the multimethod approach. They are committed to the naturalistic perspective and to the interpretive understanding of human experience. At the same time, the field is inherently political and shaped by multiple ethical and political positions. Qualitative research embraces two tensions at the same time. On the one hand, it is drawn to a broad, interpretive, post experimental, postmodern, feminist and critical sensibility. On the other hand, it is drawn to more narrowly defined positivist, humanistic, and naturalistic conceptions of human experience and its analysis. Further, these tensions can be combined in the same project, bringing both postmodern and naturalistic or both critical and humanistic perspectives to bear. (p. 24)

This characterisation captures the inherent conflict between opposing epistemologies and ontologies in qualitative writing, and clearly represents the authors' antirealist, postmodern, and constructionist perspective on social science inquiry.

The characterisations available in the literature on qualitative methodology offer little to help facilitate discussion of a broader role for qualitative research within psychology. The metatheoretical preferences in these characterisations tend to challenge the realist view dominant in mainstream psychological research. Whether an antirealist view of qualitative research is as popular as these characterisations suggest is difficult to judge accurately. Antirealist qualitative writers have considerably more publishing outlets than qualitative realist writers have, and are much more vociferous and active in championing their cause. It is also difficult to separate the voice of postmodern constructionists from the broader constructionist school in qualitative research. It seems that the postmodern constructionists represent a relatively small community of

researchers. In any case, the pursuit of specific characterisations does not help facilitate a balanced understanding of qualitative research, and generally works against the promotion of a realist view of qualitative inquiry.

2.2.2 Refraining from characterising qualitative research

Some authors, including several qualitative realists, avoid specifically characterising qualitative research. There are good reasons for not attempting to specifically characterise qualitative inquiry. Any characterisation that endeavours to encompass the breadth of qualitative epistemology, ontology, and its diverse applications becomes more of a list than a coherent and insightful statement about qualitative methods. Attending to the different philosophical positions in qualitative inquiry would result in a characterisation that needs to include contradictory metatheories. A specific characterisation would find it difficult to avoid presenting a view biased to a particular metatheoretical position. Specific characterisations are inherently limiting, and in the complex and developing area of qualitative inquiry, broad pluralistic definitions may be the best way of conceiving such a protean field (e.g., Denzin & Lincoln, 2000, p. 24). However, broad pluralistic characterisations do not promote qualitative methodology as a scientifically credible pursuit within psychology, especially if they discount a role for realist metatheory.

The Popperian view of definitions discussed briefly at the beginning of this chapter fits well with a realist account of qualitative research. Specific characterisations generally do not help the discussion of qualitative research. The writers who avoid characterisations in the qualitative literature see qualitative research as better placed within a series of flexible continua that stretch between typical components of qualitative and quantitative methodology (for examples of the use of such continua see fig 2.1; also see Bryman, 1988; Hammersley, 1992; Hayes, 1997; Shaw & Gould, 2001). These continua demonstrate that qualitative and quantitative methodologies are not inherently different, but overlap in their practices. Such continua underscore the potential to

break down the value-based differences between qualitative and quantitative methodology.

The attitude of the authors who avoid specific characterisations is in keeping with the approach of this thesis. While it is tempting to form a scientific realist characterisation of qualitative research, this view would inevitably seem to be positioned against most alternative characterisations. Arguing about the actual and ideal nature of qualitative research offers only a limited way to understand qualitative inquiry. It would seem more productive to explore the considerable overlap between realist and antirealist conceptions and uses of qualitative inquiry.

2.2.3 Qualitative realist characterisations of qualitative research

Qualitative realist characterisations of qualitative research are relatively uncommon. This is partly due to the general avoidance of definitions by qualitative realists but is more fully explained by the failure of realist researchers to specify their metatheory, as well as the dominance of antirealism in qualitative research. Variants of qualitative realism can be tentatively grouped to suggest a distinct, though broad, school of realist qualitative inquiry, although this group contains metatheoretically diverse views, and constitutes a small minority compared to the antirealist school[8]. It has been suggested there are three distinct realist approaches to qualitative research: naïve realism, scientific realism, and critical realism (Bunge, 1993; Madill et al., 2000). However, it is difficult to find examples of all these forms of realism in the published qualitative literature. An examination of psychological databases revealed no examples of naïve realist or scientific realist qualitative research. The well-known qualitative

[8] An example of the minority status of realism in qualitative research comes from two very recent qualitative psychology texts (Smith, 2003b, and Camic, Rhodes & Yardly, 2003) neither of which contains any reference to realism.

writers Miles and Huberman (1994) support 'transcendental realism[9]'. Miles and Huberman's (1994) transcendental realism in based on the acceptance of mind independence which allows them to study invisible social structures and processes as real. These social phenomena can be 'transcended' by the construction of theories that allow for a world that is constrained and limited by our perceptual abilites. This approach could be said to be analogous to scientific realism, although their metatheoretical position encompasses a number of influences, including pragmatism, and arguably sits better with critical realism. The exact nature of naïve or scientific realism is difficult to specify in any case, because both tend to have many different interpretations. However, there are aspects of the characterisation of naïve and scientific realism by Madill et al (2000) that can be questioned. Contrary to Madill et al's (2000) argument, naïve realism does not usually include a correspondence theory of truth (p. 3). Nor does scientific realism assert that "scientific method can tap true representations of the world" (Madill et al., 2000, p. 3), although representations can be constructed to approximate the world. Scientific realism holds that scientific method is best in a scientific context, not that it is the "best mode of inquiry" (p. 3) in an unqualified sense.

The third form of realism noted by Madill and co-workers is critical realism. Forms of critical realist qualitative research are somewhat easier to find (e.g., Porter, 1993, 2002; Sayer, 2000), although certainly not common and equally diverse in their interpretations of 'critical realism'. Critical realism is often presented as a 'softer' form of realism, more akin to social constructionism (Watkins, 1994). Critical realism is said to recognise the influence of the social context, the views of the researcher, and the potential subjectivity in establishing knowledge (Bunge, 1993). However, these influences are not discounted in a

[9] 'Transcendental realism' is a term used by Bhaskar (1979). The way Miles and Huberman (1994) employ transcendental realism is best expressed in Manicas and Secord (1983). This position is also known as the realist theory of science (Bhaskar, 1975) or fallibilist realism (Campbell, see Manicas & Secord, 1983), but can also be characterised as scientific realism.

scientific realist approach. There are other identifiable variations on a realist theme (e.g., Hammersley's, 1992, 'subtle realism', or Lofland's, 1995, 'analytic ethnography'), but commonly qualitative realist research is not explicitly acknowledged as such by researchers. Lofland's (1995) analytic ethnography is a fascinating attempt to reconcile rigorous ethnographic data collection and analysis but not to compromise on the value of open and flexible naturalistic enquiry. However, Lofland's acceptance of the ability of analytical process to present data and analyses as 'true' suggests he could be considered a naïve realist.

Given the infrequency of qualitative realist research articles and their variable and often erroneous interpretation of realism, it is difficult to form a clear view of how realism is represented in qualitative research. Hammersley (1996) argues that realism is a common approach in qualitative research but his references do not support anything beyond a limited qualitative realist profile. However, there are still points of commonality amongst qualitative realists that are highly relevant to this thesis. These commonalities are: seeking methodological compatibility with quantitative research, maintaining the relevance of validity, an interest in pragmatism, and an aversion to postmodern constructionist's efforts to treat qualitative research as 'sacred'. These commonalities are discussed in turn.

Qualitative realists tend not to emphasise the limitations of quantitative research as a justification for qualitative approaches. Silverman (2001) discusses the limitations and strengths of both quantitative methods and qualitative methods. He presents these critiques as a platform for intelligently selecting the methodology, or the selection of particular qualitative and quantitative methods that are best for the research question at hand (Silverman, 2001, pp. 5-37). Hammersley's (1992) 'subtle realist' framework for qualitative inquiry challenges

the supposed differences between qualitative and quantitative methodology and promotes their similarities. Hammersley comes from a sociological ethnographic tradition but his work is easily applicable to psychology. Fig 2.1 presents the seven continua he uses to represent, and then deconstruct, the supposed differences between quantitative and qualitative methodologies.

Figure 2.1 Hammersley's seven component meanings of the qualitative-quantitative distinction (Adapted from Hammersley,1992, p. 160, and Hayes,1997, pp. 4-6).

1.	Qualitative	versus	Quantitative data
2.	Investigation of natural	versus	Artificial settings
3.	Focus on meanings	versus	Behaviour
4.	Adopt natural science model	versus	Reject natural science model
5.	Inductive approach	versus	Deductive approach
6.	Focus on description	versus	Focus on prediction
7.	Idealism	versus	Realism

When closely examined, each apparently strong distinction is revealed as substantially less clear-cut. The contrasts come to represent orienting value positions and not inherent methodological differences. For example, qualitative research is often seen as excluding numbers, but qualitative study can easily use the language of quantification and include numbers. Hammersley argues that whether words or numbers are used to represent phenomena is not the real

issue. When quantitative researchers criticise qualitative researchers' use of words rather than numbers, what is usually at issue is precision. They are arguing that ethnographers are insufficiently precise in their claims, and that the necessary precision requires quantification (Hammersley, 1992, p. 162). However, it is difficult to be precise about 'precision'. The use of quantification does not necessarily improve precision, and may in fact decrease it. Whereas a simple description can exceed the precision of numbers, an argument that is accepted by experimentalists (Morgan, 1996, p. 31), the task for psychological researchers is not to choose between using words and numbers or between precise or imprecise data, but to consider "a range from more to less precise data" (Hammersley, 1992, p. 167). Our decisions about what level of precision is appropriate for a given claim should depend on the nature of what we are trying to describe, on the likely accuracy of our descriptions, or our purposes, and on the resources available to us, and less on an ideological commitment to one methodological paradigm (Hammersley, 1992, p. 163). What Hammersley helps to demonstrate is that definitions for or against quantitative or qualitative research are unhelpful, and potentially misleading, because these definitions inevitably represent normative positions. Psychology would be better served by a view of qualitative inquiry that is not opposed to quantitative methodology, a view that is contrary to most of the definitional approaches detailed in this chapter.

Qualitative realists are often influenced by the pragmatic view that there should be a strong union between metatheory and research practice. To ensure the union is strong, some qualitative realists argue that the choice of metatheory should follow the choice of method (Hammersley, 1996; Miles & Huberman, 1994; Silverman, 2001). Hammersley (1996) expresses this view as follows:

> Selection among these [quantitative and qualitative] methods requires judgment according to situation and purpose, rather than judgment based on a commitment to one or another competing philosophical view of the world and of the nature of inquiry. (p. 164)

Qualitative realists maintain that the validity criteria are highly relevant to qualitative research (Hammersley, 1992, p. 67; Morse, 1999b; Morse et al., 2002; Silverman, 2001, p. 231). The validity criteria are regarded as key evaluative criteria regardless of a researcher's metatheoretical preferences, or whether qualitative or quantitative methods are employed (Silverman, 2001, p. 233). The alternative evaluative criteria proposed by postmodern constructionists (e.g., trustworthiness, Lincoln & Guba, 1985) are generally considered poor substitutes by qualitative realists on the grounds that validity and reliability are more powerful epistemic criteria.

Lastly, qualitative realists are critical of what they see as the unhelpful attempts of the postmodern constructionists, and followers of the participatory cooperative approach, to mystify qualitative research (Hammersley, 1996; Sayer, 2000; Silverman, 1997; Snow & Morrill, 1995). They are not alone in this criticism, as many constructionists also find that depicting qualitative research as the "sacred" epistemology further confuses the role of qualitative inquiry (Flick, 2001; Atkinson et al., 2001).

2.2.4 The quantitative view of qualitative research from the qualitative literature

Given that quantitative research is just as metatheoretically and methodologically diverse as qualitative research, it is difficult to offer any unified quantitative view of qualitative research. Identifying a representative quantitative position on

qualitative inquiry is doubly challenging because quantitative researchers rarely comment on qualitative inquiry in the published literature. There are exceptions (e.g., Morgan, 1996) although most exceptions are from the evaluation literature, which generally favours a methodological pluralism with respect to qualitative and quantitative methods (e.g., Reichardt & Cook, 1979; Reichardt & Rallis, 1994a; Sechrest & Sidani, 1995). In the qualitative literature, it is qualitative researchers who generate the main characterisations of qualitative research as seen from a 'quantitative' perspective. Qualitative writers depict quantitative researchers as arguing that qualitative research is best limited to informal, preliminary observations, and interviews with participants (Flick, 2002). For example, qualitative research might be used in some form of pilot study, or for the preliminary generation of hypotheses, but qualitative research is not considered a scientific route to knowledge by itself (Denzin & Lincoln, 2000). Most quantitative textbooks on psychological research methods would support this view (e.g., Heiman, 1995). More recent textbooks do show a considerably greater understanding of the relative roles of qualitative and quantitative methods, but it is unusual to find a research methods text that offers equal weighting to qualitative and quantitative methods.

In claiming to characterise the views of quantitative researchers on the adequacy of qualitative research, qualitative researchers express those views but seldom reference them. When qualitative researchers do reference quantitative authors, the quantitative author might be focusing solely on quantitative research without reference to qualitative research, or the reference is out of date or controversial in its own field, or the qualitative author does not actually set out to criticise qualitative research. An example of these problems comes from Kvale (1996). Kvale references and quotes Calder (1977), Kerlinger, (1979), and Mussen, Conger and Kagan (1977) to demonstrate that qualitative interview research is commonly thought by quantitative researchers to be "without scientific relevance" (p. 67). These quantitative authors all appear to be adherents to the quantitative

imperative, and Kerlinger in particular seems strikingly dismissive of the individual case. However, an examination of each of these authors' writing reveals their comments are highly qualified, arguably not now representative of their fields of study, and in the case of Calder (1977), actually positive about qualitative research, specifically the use of focus groups, in a range of research situations[10]. Kerlinger (quoted in Kvale, 1996, pp. 66-67) offers exceptions and considerable qualification to his argument, and acknowledges that, "the picture I am drawing is a bit extreme" (p. 270)[11]. Mussen et al (1977) have an agenda to promote controlled observation and 'objective' measurement in the area of child development and personality. They relate the maturity of a science to the degree to which observations can be quantified (1977, p. 13). They do, however, accept that the use of interviews and observation can be concluded profitably without measurement[12]. Kvale is the exception in that he references quantitative researchers. It is typical for qualitative researchers to support their representation of the opinions of quantitative researchers with reference to other qualitative researchers who hold the same view (e.g., Denzin & Lincoln, 2000, references Huber, 1995[13], and Denzin, 1997). Not surprisingly, the qualitative representation of quantitative researchers' attitudes to qualitative research is prone to oversimplification, error, and a determination to present quantitative research as an opposing force. There is considerable irony in the fact that

[10] Calder (1977) discusses the role of focus groups in qualitative market research. He raises questions about the scientific nature of both qualitative and quantitative research, and concludes that multi-method approaches are potentially more scientific than solely qualitative or quantitative research projects. The Calder (1977, p. 355) quote used by Kvale (1996, p. 66) is taken out of context, and does not reflect the inclusiveness of Calder's methodological argument.

[11] Kerlinger's goes on to suggest there is considerable overlap between 'hard' and 'soft' sciences particularly in their inability to predict behaviour (p. 272).

[12] Recently, qualitative studies in child development have become considerably more common although they are still controversial (e.g., Geldenhuys, 2001; Gelfand; 2000; Hodge & Kemp, 2000; Turnball & Carpendale, 2001).

[13] Huber's (1995) Centennial Essay on 'Institutional perspectives on sociology' does not provide clear evidence of the resistance to qualitative studies. The essay presents a range of possible factors that could contribute to sociology departments struggling in the academic and fiscal climate of 1995. Some of these factors could relate to qualitative research but the possible relationships are not made explicit.

qualitative researchers do not rigorously represent the Verstehen of quantitative researchers but instead offer an etic interpretation that appears to approximate a claim of objectivity. It would be more helpful to represent the quantitative perspective on qualitative inquiry accurately in order to better establish what criticisms and potential benefits it contains.

This analysis of the qualitative portrayal of the quantitative view of qualitative inquiry does not suggest that the quantitative imperative is not a barrier for qualitative researchers, but serves to point out that how qualitative writers currently seek to undermine the quantitative imperative is ill conceived. This thesis acknowledges that quantitative researchers tend to hold negative views of the value of qualitative research, but these views need verification and documentation from the real experiences and opinions of both quantitative and qualitative researchers[14].

The qualitative portrayal of quantitative opinions takes relatively little note of the relevant philosophical literature on ontology, epistemology, and methodology. Consequently, qualitative researchers typically misunderstand the relationships between positivism, empiricism, postpositivism, antirealism, realism, and qualitative and quantitative research. For example, Denzin and Lincoln (2000, pp. 7-8) blame positivist and postpositivists alike for the attitude of resistance to qualitative research. However, identifying positivism, empiricism, and postpositivism as barriers to a greater role for qualitative research is incorrect because it represents a substantial oversimplification of the relationships between these schools of thought and qualitative research (Michell, 2003a; Reichardt & Rallis, 1994b; Shadish, 1995b). However, qualitative researchers correctly understand that quantitative researchers and the quantitative institutions

[14] For example, see Hutchinson's (2001) account of the considerable challenges faced in developing qualitative nursing research in a predominately quantitative environment.

of psychology are unlikely to be readily receptive to qualitative inquiry. The key barrier for quantitative researchers is the apparent inability of qualitative research to adhere to the traditional validity criteria (Rabinowitz & Weseen, 1997). Qualitative researchers, although not qualitative realists, tend to reject the traditional evaluative criteria and the metatheoretical views that underpin them (Denzin & Lincoln, 2000). Qualitative researchers generally understand these criteria as features of positivism or empiricism. However, the criteria can also be seen as helping to guarantee traditional scientific values by ensuring "methods of rigorous, critical, logical analysis" (Michell, 2003b, p. 50). In this sense, the traditional validity criteria can be applied to all metatheory and methodology. Both Phillips (2000) and Michell (2003a & b) criticise qualitative research not only for its set of poor alternative criteria for justifying knowledge claims (e.g., the trustworthiness criteria, Lincoln & Guba, 1985), but also for its unnecessary attack on traditional scientific values. The real concern is that some qualitative researchers in rejecting positivism and quantitative research are also rejecting traditional scientific values when there is no need.

A fuller understanding of the attitudes of quantitative researchers toward qualitative inquiry is required. The following points about quantitative attitudes to qualitative research have not been empirically verified, but are offered as hypotheses that suggest the situation is more complicated than the current image of quantitative psychologists barring the access of qualitative researchers to psychological institutions. It is likely that quantitative researchers are not fully aware of the research possibilities of qualitative methods. For example, relatively few quantitative researchers know that verbal protocol analysis (Ericsson & Simon, 1984/1993), and grounded theory (Glaser & Strauss, 1967) are qualitative methods that are used in psychology, or that both methods are difficult to challenge with respect to reliability and validity. Quantitative researchers could be understandably dissuaded from qualitative research because of the qualitative-quantitative debate and its associated rancour (Rabinowitz & Weseen,

1997). In addition, the complexity of metatheoretical considerations within qualitative research does not make qualitative research easily accessible (Henwood, 1996), nor are qualitative methods straightforward to learn. Certainly some psychological researchers are happy to use both qualitative and quantitative methods (e.g., Campbell & Ahrens, 1998). Quantitative researchers in psychology are clearly concerned that accepting qualitative research will mean their discipline will be seen as less scientific.

2.3 Conclusions

There is little agreement amongst qualitative researchers on the characterisation of their approach to research. Many different points of view coexist in disharmony. This does not prevent the characterisation debate from continuing. The discussion of the nature of qualitative research is moving in several directions at once. Currently relativist, 'neo-realist', and postmodernist and poststructuralist, and even post-postmodernist and post-poststructural perspectives, can all be said to be evolving (Gergen & Gergen, 2000; Smith & Deemer, 2000). The six different approaches to conceptualising qualitative research examined in this chapter support the view that a unifying concept of qualitative research is neither possible nor desirable. This situation reflects the pluralist and contradictory nature of the qualitative field. The conflict over the identity of qualitative inquiry stems from the fundamentally different assumptions held about science, reality, and the human capacity for objectivity or subjectivity in qualitative research. However, qualitative research can be critically accepted as a disharmonious family concept, albeit with an acknowledgment of the diversity of activities and philosophies undertaken under the qualitative banner, and recognition of the many contradictions and debates inspired by qualitative inquiry. Moreover, an explicit and unifying conception of qualitative research is not necessary to enable its evaluation and promotion by scientific realism.

What emerges as important is moving beyond the qualitative-quantitative debate to conceive of qualitative and quantitative methodologies as allies, not opponents. This need is particularly relevant to psychology. The potential role of qualitative methodology in psychology is broadened if it is regarded as being generally complementary to quantitative methodology, and there is considerable evidence to support the view qualitative and quantitative methodologies share blurred borders. The qualitative-quantitative debate would appear to be driven by misconceptions and a lack of awareness of the virtues of qualitative research and quantitative research and their associated metatheories. In particular, qualitative antirealists and quantitative psychologists harbour prejudices about the value of each other's methodologies and metatheoretical positions. Qualitative postmodern constructionists tend to be prejudiced against positivism, empiricism, postpositivism, and realism, particularly given their reluctance to consider the virtues of quantitative approaches. Such prejudices do not appear to be based on an accurate understanding of these metatheories, although the considerable frustrations of dealing with a quantitatively-centred discipline like psychology are recognised. Moreover, the emotional polemic surrounding qualitative research does not encourage quantitative researchers to explore qualitative approaches (Sells, Smith & Sprenkle, 1995).

There is a need to examine the qualitative-quantitative debate directly in order to confirm the belief that there is an overlap between qualitative and quantitative methods, methodology, and metatheory. This overlap supports the argument that qualitative research has a broader role in psychology, and that it can operate within a scientific realist metatheory in conjunction with quantitative approaches. The qualitative-quantitative debate is discussed in detail in chapter four. Chapter three presents a brief history of the relationship between qualitative research and psychology. This chapter is concerned with understanding how some qualitative writers have formed their maladaptive approaches to the methodological debates, and investigates how quantitative resistance to qualitative research has developed in psychology.

Chapter Three

A Brief History of the Relationship between Qualitative Research and Psychology

> Psychology is not such an easy science, nor yet such a successful one, that it is sensible to dismiss proposed methodological innovations. If resistance to proposed innovations is encountered, the way forward lies in looking for its historical and conceptual sources. (Michell, 2003a, p. 6)

3.1 Overview

Qualitative inquiry and psychological science have a long but unsustained relationship (Henwood, 1996). From the late 19th century, multiple intellectual and research traditions have evolved giving rise to distinct qualitative schools of thought. These traditions have interacted with developments in psychological science, resulting in the diminishment of qualitative practice within psychology from the 1920s to the 1980s (Ashworth, 2003; Hayes, 1997). It was not until the period from the 1960s to the early 1970s that qualitative methodology was reconsidered in psychological writing (Allport, 1962/1981; Bannister & Mair, 1968; Harré & Secord, 1972). From the late 1980s, the relationship between psychology and qualitative research has been actively rekindled, with the rapid growth of qualitative research in psychology. Qualitative writers refer to the 'explosion' in the use of qualitative methods in Anglo-American psychology (e.g., Elliot et al., 1999; Smith, Harré & Van Langenhove, 1995), particularly in Britain. However, the relationship between qualitative research and psychological science is far from fulfilled. Although growing in use, qualitative research still occupies a marginal and specialist role within psychology. Chapter two discussed how qualitative researchers tend to characterise and promote their methodology to overcome this restricted role, but with limited success, in

psychology. To shed light on the reasons for the restricted role, and to explore how the 'quantitative imperative'[15] might be dealt with by qualitative researchers, the history of the relationship between qualitative research and psychology is examined.

Historical analysis reveals three findings that need further examination if qualitative research is to have a broader role in psychology. First, qualitative research has lacked, and still lacks, a metatheoretical basis that is broadly acceptable to qualitative practitioners and psychological researchers. Second, metatheoretical and methodological gaps between qualitative and quantitative research are not as large as is normally supposed. These gaps have already been bridged by specific qualitative methods that meet the traditional criteria of research evaluation (e.g., grounded theory, Glaser & Strauss, 1967; verbal protocol analysis, Ericsson & Simon, 1993). In the qualitative literature these gaps are perpetuated by caricatures of positivist, postpositivist, and realist metatheory (Michell, 2003a), which do not take into account the alternative, highly developed views of forms of postpositivism such as scientific realism. Third, the greater employment of qualitative methodology is unlikely to be achieved by attacking psychology's quantitative culture and promoting qualitative methodology as an alternative. The 'quantitative imperative' can be better dealt with by demonstrating that non-quantitative data can be scientific (Michell, 2003b) through the application of qualitative methods that meet the relevant evaluative criteria of validity and reliability.

3.2 The origins of qualitative research in psychology

At the level of data collection, qualitative research methods have always been used in psychology as a preliminary or adjunct to quantitative methods (Flick,

[15] Michell defines the concept of the 'quantitative imperative' as, "the view that studying something scientifically means measuring it. Measurement is thought to be a necessary part of science and non-quantitative methods are thought to be pre-scientific" (Michell, 2003a, p. 6). Michell (2003a) argues that the need for measurement in psychology stems from Pythagoreanism, not positivism, as is commonly believed in the qualitative literature. Michell's argument regarding the influence of Pythagoreanism is described in gretare details in pages 64-65.

2001). However, the published psychological literature of the late 19th century, up to and including the 1920s, shows qualitative methodology, while still creating much debate and controversy, was used with the same lack of inhibition as quantitative methodology (Hayes, 1997). The practices of the early 'experimentalists', Fechner, and later Wundt and Bretano, focused on experience through self-report (Ashworth, 2003), although Fechner fervently favoured quantitative over qualitative practice (Fechner, 1987). Other 'Introspectionists' such as Wundt understood qualitative methods to be as scientifically credible as quantitative methods (Farr, 1996, Van Langenhove, 1995). James (1890, 1902), although generally highly critical of the Introspectionists, was not opposed to qualitative methodology, arguing that qualitative research aimed to understand "the varieties of the humna mind in living action" (1901/1994, p. 114; Rogers, 2000)

The methodological and metatheoretical debates that foreshadow the recent re-emergence of qualitative research in psychology can in part be traced back to the late 19th century (Smith, 1989), although there is no clear continuity from the writing of Dilthey (1894/1977) and other participants in the Methodenstreit[16] to the modern qualitative-quantitative debate (Hammersley, 1989; 1996, p.164). Dilthey (1894/1977) made the influential distinction between natural sciences (Naturwissenschaften) and human sciences (Geisteswissenschaften). He, and many prominent German social thinkers of the late 19th century, argued that the natural and human sciences are methodologically distinct. Geisteswissenschaften emphasises the need for Verstehen (or 'understanding', which in a research context generally refers to the subjective understanding of the world by research participants[17]). Verstehen, Dilthey argued, should be the

[16] In Dilthey's time, the methodological debate was known as 'Methodenstreit' or argument over method.

[17] Verstehen originally and literally means seeking "understanding" in the context of the methods of Geisteswissenschaften, and in particular through the use of Nacherleben (where the researcher uses his or her imagination to reconstruct the experience of research participants to understand the actions of those participants). However, its application and the senses of its use have become considerably more complex. For example, Habermas (1971) and Geertz (1983)

primary focus of methodology in the human sciences. With Verstehen, human behaviour was assumed to be intelligent, creative, and responsive to the research process (what could be called 'reflexive' in modern terms), and situated in a social context that is too dynamic for the methodological approach of the natural sciences (Flick, 2002). Qualitative methods were employed because they are flexible enough to allow for the flow of Verstehen. Human behaviour was not to be bound by the need to make causal explanations as favoured in the quantitatively oriented Naturwissenschaften (Dilthey, 1894/1977; Henwood & Pidgeon, 1994). Current qualitative writers often cite the distinction between Naturwissenschaften and Geisteswissenschaften as a justification for a separate qualitative paradigm (e.g., Rennie, 1995; Smith, 1989). For example, Rennie (1995) argues that qualitative research is better suited to the human sciences because the qualitative approach allows the researcher to better express their "own rhetoric" (p. 325), that is to say, research in the human sciences is a personal experience for a researcher best captured by a qualitative approach. The notion of Verstehen is frequently promoted as central to modern psychological qualitative practice (e.g., Bryman, 1988; Flick, 2002), because it is believed to faciliate the expression of the research participants' and the researchers' beliefs and reasons for acting as they do. Verstehen is an important concept but it does not have to be central to qualitative research in psychology, nor is it absent from quantitative research.

Following the Methodenstreit and Introspectionists, the open practice of qualitative research did not change greatly in psychology until the rise of Watsonian behaviourism (Ashworth, 2003; Watson, 1913). Behaviourism's inherent reductionism and experimentalism, in its initial and later forms, came to dominate psychology and was a powerful deterrent to qualitative inquiry (Hayes,

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use Verstehen in different ways to Dilthey, including the absence of any specifc form of Nacherleben In qualitative research, 'Verstehen' is a term that now requires a specific explanation of how it is being used because it is applied in both very general and specificways. For example, Verstehen is commonly used in the sense that research participants can express themselves in the way the participants feel will best express their thoughts and feelings.

1995; Smith, 1996). The so-called 'cognitive revolution' of the 1960s continued to emphasize an idealized model of experimentation in psychology, which acted as a deterrent to qualitative practice (Ashworth, 2000). In spite of the extended malaise of qualitative research in mainstream psychology from the 1920s onwards, there are many examples of the use of what can be construed as qualitative methods. Examples include, Freud's (1920) application of psychoanalysis; Kelly's role construct repertory grid[18] (Bannister & Fransella, 1971; Kelly, 1955; Smith, 1995); ethogenics (Harré, 1992; Harré & Secord, 1972); content analysis (Krippendorf, 1980); Ericsson and Simon's verbal protocol analysis (1984), Miles and Huberman's data display model (1984, 1994), the case study method (Bromley, 1986), grounded theory (Rennie et al., 1988; Haig, 1996; Henwood & Pidgeon, 1995), and more recently, Thagard's (1992) theory of explanatory coherence (or TEC). Several notable psychological researchers have also argued for a role for qualitative research in psychology. Lewin, Erikson, Piaget, and Sherif all supported and used qualitative methodology in psychology (Rogers, 2000). For example, Kurt Lewin (1948) used qualitative methods in his studies of group processes. Allport (1962/1981) adjudged that personalities could not be researched by statistics alone. However, the prevailing attachment of psychologists to the quantitative imperative had already become deeply influential in psychological institutions (Michell, 1990). In this quantitatively oriented context, qualitative research was used as long as it did not violate the traditional criteria of research evaluation, which left it with its well-documented preliminary or adjunctive role.

3.3 The re-emergence of qualitative research in psychology

The process that led to qualitative research's re-emergence within mainstream psychology did not begin until Kuhn's publication (1962/1970) of "The Structure

[18] The repertory grid is included in this list even though it generally produces quantitative data. With Smith's 1995 adaptations, it can be phenomenological, idiographic, reflexive, and non-experimental. The example offered by Smith illustrates an interesting blend of quantitative and qualitative practice. Harré (1997) also believes that repertory grids can easily be adapted to function as a qualitative method. However, questions about the reliability and validity of the repertory grid approach remain, and were recognised by Kelly (1955) when he set out this approach.

of Scientific Revolutions". Kuhn's work created an intellectual platform that allowed movement away from positivism, empiricism, the general belief in science, and the quantitative imperative, towards the use of qualitative methodology and the promotion of a *qualitative* imperative (amongst many other influences). Although Kuhn's work created great interest amongst psychologists, it did little to advance qualitative practice in psychology relative to the advancement of qualitative research in other social sciences. However, positivism and empiricism became, and still are, metatheoretical ogres to many qualitative writers.

Before continuing with the history of the relationship between qualitative research and psychological science, qualitative researchers' misperception of positivism and postpositivism needs to be examined. Qualitative writers incorrectly see positivism and postpositivism underpinning the quantitative imperative in psychology (Michell, 2003a; Phillips, 1990; Shadish, 1995b)[19]. Michell (2003a) argues that this misrepresents positivism and postpositivism as anti-qualitative and that it is in fact the ancient and continuous Pythagorean tradition that created and sustains the quantitative imperative. Specifically, the quantitative imperative originates with the pre-Socractic Pythagoreans (Huffman, 1999), who argued that "all attributes are fundamentally quantitative" (Michell, 2003, p. 7). Michell argues that this Pythagorean idea deeply influences western thought, and strongly influences psychology today. The development of the quantitative imperative can be understood as a minority movement until the seventeenth century. However, following Newton, quantitification moved from one of a number of approaches to a dominant position in the sciences and the scientists' view of reality. Michell quotes Baron Kelvin as the paragon of nineteenth century concern with quantitification

[19] Smith (1983) is the exception. He clearly distinguishes between positivism and realism, and understands logical positivism as a form of antirealism. Even though widely referenced in the qualitative literature, Smith's distinction between positivism and realism does not appear influential. However, Smith (1983; Smith & Heshusius, 1986) still argues for the incompatibility of qualitative and quantitative research.

> I often say that when you can measure what you are speaking about and express it in numbers you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind. (Thomson, 1891, pp. 80-81)

All of which occurred before the advent of positivism. This is not to say positivism cannot be logically related to the quantitative imperative, but that the quantitative imperative originates from Pythagoreanism not positivism. In psychology, the quantitative imperative has become conflated with positivism and postpositivism, although neither positivism nor postpositivism excludes qualitative research. Michell's (2003a) study of the work of a leading positivist, Rudolph Carnap, on the measurement of science shows that while Carnap was strongly in favour of quantification, he was also tolerant of alternatives. Carnap (1956) expresses his position as follows:

> Let us grant those who work in any specialist field of investigation the freedom to use any form of expression which seems useful to them; the work in the field will sooner or later lead to the elimination of those forms which have no useful function. *Let us be cautious in making assertions and critical in examining them, but tolerant in permitting linguistic forms.* (p. 221, emphasis in the original)

There appears to be no anti-qualitative view offered by positivists. While there have been many positivists who have strongly supported the quantitative imperative, positivism does not provide the outright support for the quantitative imperative qualitative writers normally accord it (Michell, 2003a).

Very few quantitative researchers now adhere to a positivist metatheory, and in the literature of the philosophy of science, logical positivism has been unfashionable since the late 1940s (Phillips, 1990). What, then, are qualitative researchers objecting to, if it is not really positivism? Michell (2003a) suggests qualitative writers are opposing naïve realism (pp. 16-17). This assessment is

certainly accurate in the case Michell uses to illustrate his point - Guba & Lincoln's (1994) portrayal of positivism. Outside the writing of prominent postmodern constructionists[20] (i.e., Denzin, 1997; Denzin & Lincoln, 1994, 2000; Guba, 1990; Guba & Lincoln, 1989, 1994; Lincoln & Guba, 2000), there is little further detail to the qualitative critique of 'positivism', but these writings consistently present naïve realism as positivism[21]. For example, Guba (1990) argues that "positivism is rooted in a *realist* ontology, that is the belief that there exists areality *out there*, drive by immutable natural laws" (p. 19; emphasis in the original). Michell shows that not only is naïve realism not anti-qualitative, but it can be shaped as a potentially useful foundation for qualitative research in psychology (Michell, 2003a). What this discussion also highlights is the influence of the postmodern constructionists on the qualitative view of quantitative research. The postmodern constructionists are only one group within the extremely broad constructionist school of thought. They often represent what is least appealing about constructionism, including support for relativism and a tendency to focus on political or moral processes in lieu of ways of obtaining a warrant for justifying knowledge claims (Phillips, 2000). For example, Lather's (1993) assertion that validity is a historically driven rhetorical construct and as such impossible to adhere to. Michell (2003b) suggests that to promote qualitative research in psychology, qualitative writers are better advised to try to demonstrate that non-quantitative data can be scientific, rather than attacking a false metatheoretical opposition and critiquing traditional scientific values such as rigour and logical analysis (p. 50). A rejection of traditional scientific values diminishes both quantitative and qualitative inquiry, and does not serve to effectively promote qualitative research over quantitative research. There is much evidence to support the view that non-quantitative data can be scientific, not least the data produced by the qualitative methods of grounded theory, verbal protocol analysis, and the theory of explanatory coherence.

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[20] Also called 'radical social constructionists'.

[21] In the same manner, Lincoln and Guba (2000) equate postpositivism directly with critical realism (p. 168).

From the time of Kuhn, many metatheoretical positions have become available to qualitative researchers in psychology. However, before Kuhn, these researchers had no broadly acceptable metatheory to underpin their work, except what was perceived as a restrictive form of positivism. Qualitative psychologists now have an extensive array of metatheoretical positions, including: numerous variations of constructionism, several metatheories based on phenomenology, variants of realism, symbolic interactionism, and interpretivism. However, none of these metatheories appears able to generally satisfy both the scientific perspectives of mainstream psychological researchers and qualitative oriented psychologists. Although all the metatheories warrant further consideration, it is scientific realism that this thesis advances as the metatheory that can potentially best satisfy both camps.

Returning to the history of qualitative research in psychological science, the recent expansion of interest in qualitative methodology has occurred later, and more slowly, in Anglo-American psychology than in other social sciences. This is largely due to psychology's stronger emphasis on the use of quantitative methodology and its closer identification with the natural sciences. Qualitative research in British psychology has grown faster than in North American psychology (Rennie, 1999), although several British-based qualitative psychology texts have a strong North American influence (e.g., Smith, 2003b). While the 1960s marked the beginning of the greater employment of qualitative research in most social sciences, it was not until the late 1980s to early 1990s that a minority of psychologists started to emphasise the use of qualitative methods in psychology (including in chronological order, Antaki, 1988; Rennie et al., 1988; Tesch, 1990; Henwood & Pidgeon, 1992; Burman & Parker, 1993; and, Banister et al., 1994). Earlier attempts were made by some psychological researchers to promote qualitative research practice in Britain (e.g., Bannister & Mair, 1968; Harré & Secord, 1972), but they had little impact. Richardson (1996) attributes the failure of these early attempts to achieve a larger role for qualitative research

to the manner of their approach, whereby, they attacked the quantitative tradition and its metatheoretical position. The use of a negative approach to promote qualitative research in psychology, was, and is, a limited strategy, yet strong criticism of positivism, empiricism, and the quantitatively oriented institutions of psychology are not hard to find (e.g., Burman, 1997; Gergen & Gergen, 2000; Lincoln & Guba, 2000; Strean, 1998).

The relationship between qualitative inquiry and psychological science is now growing stronger, although only in parts of psychology. Psychological researchers are developing and utilizing an impressive range of qualitative approaches, including grounded theory (Rennie et al., 1988; Henwood & Pidgeon, 1995; Rennie, 1998, 2000 Charmaz, 2000, 2003), phenomenological analysis (Smith, 1991; Smith & Osborn, 2003), ethnography (Weiss, Marvin & Pianta, 1997), case studies (Bromley, 1986), critical emancipatory research (De Boer, 1983), the application of hermeneutics (Packer, 1985; Rennie, 1999), discourse analysis (Potter & Wetherell, 1987, 1995; Willig, 2003), focus groups (Wilkinson, 1998, 2003), narrative analysis (Gergen & Gergen, 1984; Murray, 1997; Flick, 2002), ecological psychology (Jacob, 1987), participatory-cooperative inquiry (Reason & Heron, 1995), verbal protocol analysis (Ericsson & Simon, 1984, 1993; Green, 1995), conversation analysis (Drew, 2003), and the theory of explanatory coherence (Thagard, 1992). This is not an exhaustive list. For example, there are several more applied qualitative approaches that derive from the existential-phenomenological tradition within psychology (see Tesch, 1990).

Qualitative research has become most popular in those areas of psychology where social issues and professional practice explicitly connect with psychological theory (Henwood, 1996). This connection is evident in community psychology (Stewart, 2000), health psychology (Lyons, 1999), and clinical and counselling psychology, in particular psychotherapy (Elliot, 1995; Rennie 1992). For example, Elliot (1995) gives a very useful illustration of where qualitative and

quantitative methods can apply to different stages of researching psychotherapy. Qualitative inquiry has also found expression in applied social psychology (Henwood & Pidgeon, 1994; Snow, 1999). In postmodern social psychology, qualitative methodology has been presented as the best way to explore political and moral issues (Weisenfeld, 2000). Weisenfeld (2000) reviews a wide range of theoretical works and empirical studies into qualitative research to support her case that qualitative research provides a sensitivity to moral and political issues that quantitative research cannot match. Postmodern social psychology includes further manifestations of qualitative practice including critical social psychology (Parker, 1997), and liberation or emancipatory social psychology (Sampson, 1993; Teo, 1998). Further evidence of qualitative inquiry's infiltration into specific areas of psychological research is the strong links between qualitative research and sports psychology (e.g., Culver, Gilbert & Trudel, 2003; Sparkes, 2002; Stelter, Sparkes & Hunger, 2003). Sparkes et al (2003) argue that the multidimensionality of sports psychology requires the flexible, adaptable research method that qualitative methodology offers. There are now a variety of textbooks which focus on psychology and qualitative research (e.g., in chronological order, Banister et al., 1994; Richardson, 1996; Hayes, 1997; Kopala & Suzuki, 1999; Willig, 2001; Flick, 2002; Smith, 2003b; Camic et al., 2003), at least fourteen academic journals dedicated to qualitative research, specific university positions for psychological qualitative researchers, and a journal solely for qualitative research in psychology that began publication in 2004[22].

However, although the adoption of qualitative methodology in psychology is growing, it still occupies a marginal and specialist role. Several analyses show that qualitatively-oriented articles are uncommon in mainstream psychology journals (Kidd, 2002; Krahn, Hohn & Kime, 1995; Morrow & Smith, 2000; Munley et al., 2002; Rennie et al., 2002). Since the 1980s, there has been a dramatic increase in the quantity of published qualitative research, but this has occurred

[22] Qualitative Research in Psychology, edited by David Giles, Brendan Gough, and Martin Packer, and published by Arnold.

mainly in specialist qualitative journals. As Kidd (2002) has shown, there is a lack of clarity in the position of the APA and mainstream psychological journals about the publication of qualitative research. Journal editors are unsure about the criteria they should apply to qualitative submissions, and qualitative researchers experience frustration in getting their work recognised and published in those journals. The criteria set out by the APA manual does little to encourage qualitative inquiry, because it emphasises experimental evidence, mathematics, and the avoidance of metaphors and other expressive language (APA, 2001; Rogers, 2000, p. 77)[23]. There is, however, a considerable qualitative literature in psychology outside mainstream journals in the form of books, books chapter, and instructional texts. The considerable size of this literature appears to be a result of the lack of access to mainstream journals (Rennie et al., 2002). Some quantitative textbooks now include more substantial, and less sceptical, chapters on qualitative research (e.g., Kazdin, 1998). This is an important development because one of the main barriers to the greater use of qualitative research in psychology is the lack of awareness by quantitative researchers of qualitative methods.

The teaching of qualitative research in undergraduate or graduate psychology classes is uncommon (Camic et al., 2003; Rennie et al., 2000; Smith, 1996; Stoppard, 2002), although the teaching of qualitative research shows a small increase since 1985 (Keeley, Shemberg & Zaynor, 1988; Kopala et al., 1997). Psychology has a much deeper interest in the teaching of methodology than the natural sciences, but tends to focus heavily on quantitative approaches (Meehl, 1978; Perlman & McCann, 1999; Proctor & Capaldi, 2001). Psychology is overtly self-conscious about the nature of its methods (Sechrest & Sidani, 1995) and very concerned that the methods it uses be seen as scientific (Michell, 2003b). The resistance to the teaching of qualitative research is not a barrier to some.

[23] A recent positive development is the new text, "Qualitative research in psychology: Expanding perspectives in methodology and design" by Camic et al (2003), which was published by the APA. That the APA are the publishers of this book is, as the authors note, "one of the most striking features of this volume" (p. xiii).

Stoppard (2002) documents how she overcame the obstacles to providing a graduate course on qualitative methods in a quantitatively oriented psychology department. Several qualitative writers note that what training there is in qualitative methodology is not of an acceptable standard (e.g., Elliot et al., 1999; Krahn et al., 1995).

The main barrier to preventing the widespread incorporation of qualitative methods into mainstream psychology is the view that qualitative methodology does not seem to represent good science. Most psychological researchers appear reluctant to adopt qualitative methodology until proponents of qualitative research can demonstrate the existence of evaluative methods that are valid and based on a scientifically credible metatheory. It is reasonable that qualitative research be placed under such scrutiny, and that qualitative research is evaluated on more than the authority of the researcher (Madill et al., 2000, p. 2). The 'traditional' validity criteria of evaluating knowledge claims do not apply well to most qualitative methods (although qualitative methods underpinned by realist metatheory are an exception). Manicas (1987), amongst others, has questioned whether reliable and objective research is achievable in the social sciences. Qualitative researchers working in psychology have expressed the concern that the traditional criteria of research evaluation are too restrictive and enforce too narrow a view of science by not providing a role for the flexible and subjective processes qualitative research can allow for when seeking a better understanding of complex human behaviour (e.g., Henwood & Pidgeon, 1994; Rennie et al., 1988; Strauss & Corbin, 1990). However, as Banister et al (1994) insist,

> Quantitative research preoccupations [e.g. criteria of research evaluation] do need to be taken seriously, and if qualitative research needs to refuse questions that are habitually posed in the mainstream it must at least explain why it does not address those questions. (p. 14)

3.4 Social constructionism and scientific realism as bases for qualitative research in psychology

While qualitative research has historically lacked a clearly articulated metatheoretical basis for its wider application in psychology, this is no longer the case. There are now many metatheoretical options available to psychologists who wish to employ qualitative methodology, although none of these metatheories appear broadly acceptable to both mainstream psychology and qualitative practitioners. This thesis will explore two metatheoretical options for qualitative research in psychology: social constructionism (discussed in detail chapter six), and scientific realism (specifically examined in chapter seven).

Constructionism is an expansive metatheoretical school comprising many different versions, of which a large number have been applied in qualitative research. Social constructionism is probably the most common metatheoretical position of qualitative psychologists (Gergen, 1985). Such is the confidence of social constructionists in qualitative research, that they often automatically assume their metatheory best fits qualitative practice and vice versa (e.g., Henwood & Nicholson, 1995). Gergen (2001a) claims that postmodernism is the progenitor of social constructionism and that the, "unparalleled flourishing of [qualitative] methodology" in the social sciences is due to "postmodern dialogues" (p. 810). While the social constructionist view of qualitative methodology has been considerably more prominent than the realist views in recent years, postmodernism appears to have no greater influence on mainstream psychology than it did a decade ago. Indeed, postmodernism may have reached its "high-water mark" (Porter, 2002, p. 59; Atkinson et al., 2001). Psychological researchers and other social scientists advocating a postmodernist view do tend to overstate the influence of this thinking on qualitative researchers within and without psychology (Snow & Morrill, 1995). Rennie et al (2002) are more accurate in suggesting that, "a path has been cleared for...[qualitative research] *in part* by the postmodern critique of the modern quest for objective knowledge" (p. 179, emphasis added). The strength of the social constructionist position,

with some of its proponents' caricaturising of positivism, empiricism, and postpositivism, obscures both the usefulness, and range (Madill et al., 2000), of alternative metatheoretical approaches to qualitative research, particularly realism. The advocacy of postmodernism also tends to move the focus away from considering which methods are best for a specific research question, to asking whether a qualitative or quantitative methodology should be applied (Silverman, 1997; Schwandt, 2000). The promotion of qualitative methodology in this manner tends to obscure the benefits and developments in quantitative methods (e.g., structural equation modelling, confirmatory and explanatory factor analysis, and regression discontinuity designs).

Although realism is not popular in qualitative research, it is sometimes cited as an important metatheoretical approach to qualitative research in psychology (Hammersley, 1996; Henwood & Pidgeon, 1994; Madill et al., 2000), although its frequency of use is difficult to ascertain. Realism, like constructionism, has many variations. Some authors have distinguished between naïve, scientific, and critical realism (e.g., Bunge, 1993), but the qualitative literature often fails to distinguish between realism, positivism, empiricism, and postpositivism. Variants of realism must be distinguished from other variants of positivism and elements of empiricism in order to overcome misleading accounts of what they can offer qualitative research.

The debate over which metatheoretical positions are most appropriate for qualitative research in psychology is a major focus of this thesis. This debate will be encountered regularly but it is examined in detail in chapters six and seven. Although there are aspects of social constructionism that are appealing, a form of scientific realism will be presented as the metatheory that best supports and potentially broadens the role of qualitative research in mainstream psychological science.

3.5 Conclusions

Psychologists have viewed the recent return of qualitative research to psychology with due caution (Haig, 2002a). Generally, psychologists remain to be convinced that qualitative methodology can be broadly employed within an acceptable metatheoretical position that includes the acceptable criteria for justifying knowledge claims. As Henwood (1996) notes, "Much stands to be gained by questioning this apparent exclusion of qualitative research from psychology...and, indeed, the apparent exclusion of psychology from qualitative research" (p. 25).

The brief history of the relationship of qualitative research an psychological science discussed in this chapter underlines the need for a metatheory for qualitative methodology that is appropriate to psychology. However, is it better qualitative research accommodates psychological science, or that psychology joins the considerable list of other social sciences that accommodate qualitative inquiry? One aim of this thesis is to provide psychological researchers with a justification for using an expanded repertoire of qualitative methods, while also ensuring those methods are scientifically acceptable. The onus appears to fall more heavily on qualitative research to demonstrate its scientific credentials than on psychology to broaden its view of science, although both are to be encouraged as positive developments.

One possible indicator that qualitative researchers and psychologists are not so far apart in their views of science is that the current gap between the largely realist metatheory of mainstream psychology and the typically social constructionist metatheory of qualitative research is encouraged by the incorrect assumptions about the nature of their approaches to research on both sides (Michell, 2003b)[24]. This is particularly evident in the belief that positivism, empiricism, and realism only support quantitative, not qualitative, research. More practically, the methodological gap between qualitative and quantitative research

[24] Chapters 5, 6 ,and 7 detail the incorrect assumptions in specific detail.

has already been bridged by at least three qualitative methods (i.e., grounded theory, verbal protocol analysis, and the theory of explanatory coherence), all of which overcome the assumed inability of qualitative approaches to address the validity criteria for evaluating the scientific worth of knowledge.

What also prevents a fuller and broader relationship between psychology and qualitative research is the seeming lack of a metatheory that allows the use of either quantitative or qualitative methodology, or a metatheory that allows a carefully considered mix of both, but still adheres to the validity criteria for justifying knowledge claims. In examining two metatheoretical competitors, social constructionism and scientific realism, a specific form of scientific realism is presented as the more appropriate position from which psychological researchers might employ qualitative methods, and combine qualitative and quantitative methods that meet the validity criteria for knowledge evaluation.

It is equally important to conceptualise qualitative methodology as not being implicitly or explicitly opposed to quantitative methodology and its metatheoretical positions. The view that qualitative methodology is a better alternative than quantitative methodology is unproductive, because it obscures the relative strengths of each methodology. Adopting qualitative methods does not automatically solve the problems faced by quantitative methods, and it risks overlooking positive metatheoretical and methodological developments made by quantitative researchers in psychology. The debate over the relative merits, and metatheoretical compatibility, of qualitative and quantitative methodology is complex and operates on many levels. It is a debate this thesis will need to resolve in part if a broader role for qualitative methodology in psychology is to be advanced. The qualitative-quantitative debate is discussed in the next chapter. The question of how to address the quantitative imperative is examined in chapter five, where the focus will be not on attacking the quantitative imperative, but showing non-quantitative data can be scientific (Michell, 2003b).

Chapter Four

The Qualitative-Quantitative Debate

> A systematic engagement with this quantitative-qualitative debate does indeed make a difference at several related levels. At a general level this issue brings to the forefront the epistemological question of what is to count as knowledge. If researchers do not discuss this question, they are forfeiting any participation in determining the basis for the authority of their knowledge. The point here is that practicing researchers should have as much, if not more, to say about this issue as anybody, including philosophers. (Smith, 1983, p. 12)

4.1 Overview

The qualitative-quantitative debate (QQD)[25] is the continuing controversy over the relative merits and metatheoretical compatibility of qualitative and quantitative inquiry. One view is that these two approaches to research are distinct and based on incommensurate metatheories. This chapter will argue for the alternative view that there is a significant methodological and metatheoretical overlap between qualitative and quantitative research. The existence of a substantial overlap supports the position that qualitative and quantitative research can be used within the same metatheory, and as complementary approaches, in certain research situations. It would help psychologists gain access to the benefits of qualitative research if qualitative and quantitative inquiry can be shown to be potentially compatible within a scientifically acceptable metatheory. However, although the QQD revolves around philosophical or methodological arguments, the debate is often prejudiced (Michell, 2003b) and driven by rhetoric (Firestone, 1987) (as chapters two and three showed). For

[25] The controversy over the comparative roles and benefits of qualitative and quantitative methodology has a number of titles. It is variously known as the 'methodological paradigms debate' (Patton, 1988), the 'paradigm wars' (Gage, 1989), the 'quantity-quality debate' (Bryman, 1988), or the quantitative-qualitative divide (Hammersley, 1996). The 'qualitative-quantitative debate' is used in this thesis, because it is probably the most common.

example, Lincoln and Guba (2000), in advocating for qualitative research, predict "that, if not in our lifetimes, at some later time the dualist idea of an objective reality suborned by limited human subjective realities will seem as quaint as flat-earth theories do to us today". (p. 178) This chapter argues that the way the qualitative-quantitative distinction is drawn is often a misleading representation of the diverse range of methods and metatheory available to psychological researchers (Hammersley, 1996; Oakley, 2000; Shadish, 1995a & b), and a more complementary conception their relationship needs to be explored.

The QQD literature is enormous and is sustained by a wide variety of factors: from philosophical and methodological misconceptions and confusions (for example, the confusion over what is positivism and what is realism), opposing metatheoretical orientations that exaggerate the differences between quantitative and qualitative approaches (Bavelas, 1995), political and moral agendas (Heap, 1995; for example, that quantification suppresses the ability of research participants to express themselves in the way they would experience as most empowering), and variable criteria for evaluating the worth of knowledge claims (Krantz, 1995[26]; for example, the trustworthiness criteria of Guba, 1985). Some researchers consider the QQD to be vital to the continuing development of methodology and metatheory (e.g., Smith & Heshusius, 1986). This thesis argues that qualitative and quantitative research are not mutually exclusive (Newman & Benz, 1998), that they are not interchangeable, and the one does not provide an automatic solution to the problems the other faces. It is also claimed that good science embraces methodological pluralism (Sechrest & Sidani, 1995). Qualitative and quantitative approaches are potentially compatible on both a methods and methodological level, but this can be shown only through careful consideration of the internal coherence of the different methods, methodology, and metatheory. What is most important is that there is more to gain in

[26] There is an extraordinary range of evaluative criteria that has been proposed as an alternative approach to using the standard validity criteria (see Lincoln & Guba, 1985; Elliot et al., 2000; Seale, 1999b).

psychology (for example, access to useful methods and a variety of metatheories) by breaking down the barriers between qualitative and quantitative research than in maintaining a dichotomous view of their relationship (Greene & Caracelli, 1997).

The conflict between the qualitative and quantitative 'paradigms' is unhelpful to researchers because it limits their methodological and metatheoretical choice. Although it could be argued that opposition to quantitative methodologies has helped qualitative researchers develop more and varied methods. There has been a remarkable growth in the qualitative methods of data collection and data analysis, and qualitatively-oriented metatheory in the last twenty years. However, the benefits of these methods are lost to psychology if psychological researchers do not have access to them. These benefits include, the flexibility of qualitative methods to adapt to 'real world' situations, to allow for complex social and cultural factors that a quantitative format is less sensitive to, and to facilitate the deeper study of the beliefs people act upon. For qualitative research to be more widely employed by psychological researchers, it needs to be characterised as less of an opponent to the quantitative practices of psychologists. This is not to say qualitative inquiry needs to change itself in order to suit the current methodological preferences of psychologists. Rather, it is to acknowledge that it is necessary to recognise that some qualitative approaches can attain the worth of quantitative methodology. For example, certain qualitative approaches can operate without extensive change according to the metatheory of scientific realism proposed in this thesis. Qualitative research can be characterised as compatible with quantitative methodology without abandoning its identity or forsaking its benefits. In this way, qualitative research does not become, "a procedural variation of quantitative inquiry" (Smith & Heshusius, 1986, p. 8) but provides another extensive set of metatheoretical and methodological ideas for psychologists. Psychology can become like other sciences and use quantitative

and qualitative approaches (Sechrest & Sidani, 1995[27]), without the marginalisation of qualitative methodology.

This chapter examines the main positions in the QQD, and argues for the productive commensurability of qualitative and quantitative research through a form of 'methodological pragmatism'. Methodological pragmatism supports methodological pluralism and allows for considerable metatheoretical flexibility, but maintains that researchers should acknowledge their assumptions about what counts as knowledge before beginning research, and be consistent in the use of those assumptions and the methods that stem from them. The main positions on the value of the QQD vary considerably both on the relevance of metatheory, and the relationship between metatheory and methods. On the one hand, methods have been argued to be more important for epistemology (e.g., Howe, 1988), because using the best method (the one that will best access the required information) is of greater practical help than whether the researcher believes the information generated is social constructed or in some manner an approximation of truth. Conversely, epistemology has claimed to be more important than methods (e.g., Smith & Heshusius, 1986), because if the researcher does not establish what counts as knowledge how can the researcher appreciate the quality of his or her findings Before the main positions in the QQD are examined, a discussion of the general nature of the QQD is important. This discussion of the nature QQD will help identify the misconceptions and confusions that prevent greater commensurability between qualitative and quantitative research.

4.2 The nature of the qualitative-quantitative debate

The QQD has created a huge literature with strong philosophical, methodological, personal, political, moral, and ethical currents but it has brought about little encouragement of the adoption of both qualitative and quantitative approaches in

[27] Sechrest and Sidani (1995) provide examples from astronomy, evolutionary biology, and geology that demonstrate the use of qualitative approaches in the 'natural' sciences. Morgan (1996) supplies an example of qualitative research being used in particle physics (p. 31).

psychology. For twenty years, there has been active pressure to use qualitative approaches in psychology but with no significant effect (Rabinowitz & Weseen, 1997). It is regularly argued in the QQD literature that the views of the opposing sides have become more entrenched (e.g., Hammersley, 1996; Lincoln & Guba, 1992, 2000; Sechrest, 1992; Sechrest & Sidani, 1995). There are frequent calls for greater methodological pluralism in the social sciences (Kidder & Fine, 1987; Krantz, 1995; Patton, 2002; Reichardt & Rallis, 1994a; Tashakkori & Teddlie, 1998), but these calls are usually predicated on the understanding that metatheoretical barriers between qualitative and quantitative inquiry are best ignored, or that the research process is driven by the pragmatic selection of methods unconnected to metatheoretical concerns. Even though the QQD continues, most social sciences are now significantly more methodologically pluralist than they were twenty years ago. Psychology is a notable exception.

In the QQD literature, it is rare for the QQD to be characterised as anything other than an oversimplification of the diverse reality of researchers' metatheory and practice. The debate is characterised as highly repetitive, ill-tempered, philosophically abstract, erroneous, and lacking in concrete suggestions for the use of multiple methods (Patton, 2002; Phillips, 1990; Rabinowitz & Weseen, 1997; Reichardt & Cook, 1979; Reichardt & Rallis, 1994b; Shadish, 1995b). Not surprisingly, researchers express weariness with the QQD. For example Pawson and Tilley (1998) comment,

> Is there anything more to be said about the paradigm wars?...What one sees is a musty stalemate over first principles, which has made no difference to the overall balance of evaluation activities. Thus, experimentalists still manipulate and control, realists prefer to muse on causal configurations, constructionists choose empathy and negotiation, auditors balance costs with benefits, post-modernists lounge playfully in linguistic ellipses, and so on and so forth. (pp. 73-74)

The QQD is conducted on a number of different but related levels, causing authors writing on different levels to talk past each other (Bryman, 1988, 1992). Authors also tend to place different or implied emphases on how different levels interact with the same effect (Bryman, 1988, 1992). For example, the role of metatheory is typically discussed without clarifying how the metatheory relates to methodology and method. A broader confusion is created because the QQD "often acts as a lightning conductor for numerous other disagreements about the principles and practice of research" (Hammersley, 1996, p. 159). In this sense, the QQD has taken on a life of its own, representing wider political and philosophical concerns than was first expressed when it began approximately forty years ago (Oakley, 2000[28]). This expansion of the QQD has resulted in a larger battlefield rather than a resolution of any particular aspect of the debate. Several authors have shown the QQD tends to perpetuate misconceptions of the philosophy that underpins the combatants' metatheories, particularly with respect to positivism and empiricism. The real basis for metatheoretical disagreement is substantially smaller than is normally supposed (Michell, 2003a; Phillips, 1990; Reichardt & Rallis, 1994b; Shadish, 1995b; for example, important writers on both 'sides' reject positivism). Given these problems, it is not surprising that there is considerable confusion, and not a small amount of emotion and rancour in the QQD. Rabinowitz and Weseen (1997) note that there is almost no empirical research into the nature of the QQD, a fact that probably contributes to the persistence of the confusions. Rabinowitz and Weseen (1997) interviewed twenty PhD students studying psychology (ten qualitatively oriented students and ten quantitatively oriented students) to explore attitudes towards the QQD. Their analysis of the opinions of the students supports the concerns highlighted in this overview of the QQD literature, namely: that the students felt confused over the role of metatheory and how it relates to methodology and methods. They also

[28] Oakley (2000) argues that Cicourel (1964, the concept of 'quantofrenia'), Glaser and Strauss (1967, grounded theory) and Garfinkel (1967, the development of ethnomethodology) marked the beginning of the QQD. An alternative view is that the 'modern version' of the QQD began with Cook and Reichardt's (1979) "Qualitative and Quantitative Methods in Evaluation" (Krantz, 1995), but this beginning is confined to the QQD within the evaluation and mixed method literatures.

expressed concern about the political expediency of their chosen methodology, particularly the qualitative students. Students also reported struggling to achieve a balanced understanding of quantitative and qualitative methodologies in a quantitatively oriented discipline, acknowledging a lack of understanding of the benefits offered by the 'other' methodology[29].

However, the confusions and misconceptions in the QQD need not prevent the active examination of this "cacophonic literature" (Rabinowitz & Weseen, 1997, p. 605), but they do need to be avoided. To better navigate the confusions in the QQD, and to facilitate the view that qualitative and quantitative research can be commensurate, the main positions in the QQD are set out below. Although, there are several existing labels for the main positions, some new terms are introduced to identify positions that have become conflated.

4.3 The main positions in the qualitative-quantitative debate

There are two main positions in the QQD, and each position has two versions (see figure 4.1). The first position can be called 'fundamental differences'[30]. This position holds that qualitative and quantitative methodologies are fundamentally different at all levels including the metatheoretical level. Within the fundamental differences position, it is possible to distinguish two versions. One version is respectful of the differences between qualitative and quantitative methodology while maintaining they are incommensurable (Smith, 1996). This position can be labelled the 'concurrent paradigms' view[31]. The second version is more common and is typically called the 'competing paradigms' view (e.g., Denzin & Lincoln, 2000). Here qualitative and quantitative approaches are fully incommensurate, and the two methodologies compete as if there should be only one dominant

[29] Rabinowitz and Weseen (1997) balked at the prospect of interviewing academic staff about the QQD, because they were concerned that the staff may have become set in their methodological ways, preferring the potentially 'developing' methodological attitudes of PhD students.

[30] Also known as the 'incompatibility thesis' (Howe, 1988), the 'purist' position (Rossman & Wilson, 1985), and 'methodological imperialism' (Howe, 1992).

[31] Also known as 'disjunctive eclecticism' (Howe, 1992).

methodology. In both forms of the fundamental differences view, metatheory dictates both the methodology and methods to be employed.

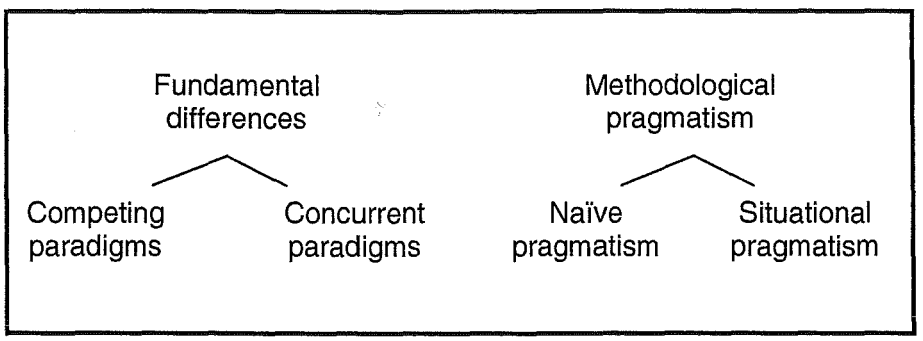

Fig 4.1 The main positions in the QQD

The second main position in the QQD can be called 'methodological pragmatism', which also has two distinguishable variants. The methodological pragmatic position is the norm in the evaluation research and mixed methods literatures (Patton, 1987; Reichardt & Cook, 1979; Tashakkori & Teddlie, 1998), and tends to be supported in certain forms by qualitative realists (e.g., Hammersley, 1996; Miles & Huberman, 1994; Silverman, 2000). Methodological pragmatists share the view that qualitative and quantitative methodologies can be commensurate at the levels of methodology and methods. However, the role of metatheory in methodological pragmatism varies. Under the first variation, 'naïve pragmatism'[32], metatheory can be ignored as an impractical obstacle in seeking answers to research questions (Patton, 2002; Watts, 1992). The second variation of methodological pragmatism is 'situational pragmatism'[33]. This

[32] This naive pragmatic approach is similar to the 'situational' approach (Hathaway, 1995), the 'technical' position (Bryman, 1988), the 'autonomy thesis' (Reichardt & Cook, 1979), Howe's (1988) 'compatibility thesis', and Rossman and Wilson's (1985) 'pragmatic' position.

[33] Situational pragmatism is similar to Hammersley's (1996) 'methodological eclecticism', Howe's (1988) 'methodological compatibilism', and Firestone's (1987) 'pragmatist' position, but is distinguished by its greater emphasis on the role of metatheory in determining the methodology and methods employed.

approach maintains a role for metatheory but the choice of methods comes first, thus ensuring the appropriate methods are selected unencumbered by metatheoretical restraints (e.g., Hammersley, 1996; Shadish, 1995a). Under situational pragmatism, methods are not taken to represent metatheoretical positions (Bryman, 1992). For example, the use of grounded theory, or any qualitative method, not does dictate that the researcher should follow a social constructionist metatheory, rather than, say, a realist metatheory.

The two main positions in the QQD, fundamental differences and methodological pragmatism, are examined next. A third position, which is based on methodological pragmatism, is also presented. This position argues for the employment of both qualitative and quantitative methodology but from a clearly explicated and more consistent metatheoretical stance that takes full congruence of the task of selecting the appropriate methods.

4.3.1 The fundamental differences view of the qualitative-quantitative debate

Competing paradigms position

This form of the fundamental differences view argues that qualitative and quantitative research are incompatible. The methodologies are said to compete with each other from opposing metatheoretical positions on the nature of reality and how reality is to be researched (e.g., Guba, 1987, 1996; Guba & Lincoln, 1994; Lincoln & Guba, 2000; Reason & Rowan, 1981; Smith & Heshusius, 1986). One methodological 'paradigm' is said to preclude the other (Guba, 1987). Researchers are advised to pick one methodology, because it is impossible to employ both (Lincoln & Guba, 1985). The main barrier between the paradigms is held to be at the level of metatheory not methods, because metatheoretical incompatibility is said to override methods compatibility. Smith and Heshusius (1986) and Guba (1987, 1996[34]) accept the idea that qualitative and quantitative

[34] Guba's fluctuates in his advocacy of the 'one methodology' position. For example, Guba (1996) concedes that there are possible "intermediate positions" on some dimensions between

research can be compatible on a methods level, but warn that this compatibility is misleading. The different conceptions and ways of researching reality employed by qualitative and quantitative researchers ensure that, whatever methods are used, different world-views are being acted upon, thus ensuring the incompatibility of qualitative and quantitative approaches.

The competing paradigms view has grown to include many other factors such as ethical, political, and ideological issues. It seems to be a rallying point for those who wish to change what they see as the quantitative-oriented nature of most research institutions. Support for the competing paradigms position is common in the qualitative literature, coming particularly from postmodern constructionists, although it does not enjoy unified support from qualitative researchers. Qualitative postmodern constructionists tend to play up the competing paradigms view (e.g., Guba & Lincoln, 1994; Lincoln & Guba, 2000). For example, Lincoln and Guba (2000) argue that "commensurability between positivist and postpositivist worldviews is not possible". (p. 169)Whereas qualitative realists (e.g., Bryman 2001; Hammersley, 1996; Silverman, 2000) play down the differences between qualitative and quantitative research. For example, Hammersley (1996) argues that there is no "stark constrast" between the types of data qualitative and quantitative researchers deal with, but a difference in the degree of precision, structure and contextualisation required by each methodology (p. 164). The competing paradigms view is neither supported nor rejected in the quantitatively-oriented literature. This literature generally avoids discussion of methodological paradigms and world-views (Reichardt & Cook, 1979). It is certainly easier for quantitative researchers to ignore the QQD because they enjoy a significant power and resource advantage over qualitative researchers (Rabinowitz & Weseen, 1997).

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qualitative and quantitative approaches, before reasserting that the ontological incompatibility between the two methodologies cannot be overcome (1996, p. 46).

Concurrent paradigms position

The 'concurrent paradigms' view sees the two methodologies as incompatible but argues that there is little to be gained by each criticising the other. It is maintained that the choice is between two respected alternatives and depends on the researcher's personal taste as to which is employed (Hammersley, 1996). Qualitative and quantitative research are taken to suit different questions (Smith, 1989), and the researcher needs to stay within the bounds of one paradigm. Although not commensurate, the qualitative and quantitative paradigms are each seen as internally coherent. The researcher is expected to apply a metatheory, methodology, methods, and evaluation criteria that cohere within a methodological paradigm (Madill et al., 2000). The metatheoretical position of the researcher dictates the choice of both methodology and methods. The key difference between qualitative and quantitative research is held to be at the level of metatheory, but no two neatly opposing metatheories represent qualitative and quantitative research. However, many followers of the concurrent paradigms view (and the competing paradigms view) convey the impression that this is so. For example, Smith (1984) argues that quantitative research is aligned to a realist perspective (Smith most likely intends this as a naïve realist position) and qualitative research is wedded to an idealist metatheory. It is possible to discern a range of opposing metatheoretical debates in the QQD. For example, Hammersley (1996) suggests that both versions of the fundamental differences view understand the quantitative and qualitative paradigms to be contrasted in respect of realism versus idealism, naturalism versus anti-naturalism, and deductivism versus inductivism. In addition, the terms 'realism', 'idealism', and 'naturalism' contain such a diversity of philosophical meanings they cannot be readily applied without considerable clarification of what form they are taking, and what influence they are generating on quantitative and qualitative methodology respectively. A broader, and perhaps more accurate, metatheoretical representation of the QQD would be to take realism as the metatheory of quantitative research and antirealism as the metatheory of qualitative research, although again there are quantitative researchers who are antirealists and

qualitative researchers who are realists (e.g., Hammersley, 1992; Miles & Huberman, 1994; Porter, 2002; Sayer, 2000; Silverman, 2001; Snow & Morrill, 1995).

A critique of the fundamental differences view

The major problem with both versions of the fundamental differences argument is that the differences between qualitative and quantitative methodology are not clear-cut. Although the two methodologies can be argued to be distinct, their boundaries are in fact highly blurred. A number of authors have demonstrated this at metatheoretical, methodological, and methods levels (e.g., Bryman, 1988, 1992; Hammersley, 1992, 1996; Howe, 1988, 1992; Sechrest & Sidani, 1995; Shaw & Gould, 2001). Thus, the distinction between qualitative and quantitative paradigms is a question of degrees not kind. Hammersley (1996) suggests,

> There are, however, some serious problems with this 'paradigm' view of the relationship between quantitative and qualitative research. For one thing, if we look at research today in the human sciences, we find that much of it does not fall neatly into one or other of these two categories. There are multiple methodological dimensions on which research varies: these do not lie in parallel, and each involves a range of positions, not just two. (p. 160)

Furthermore, to suggest that either qualitative or quantitative approaches are internally coherent would be to greatly oversimplify the diversity of research that each contains. As the earlier discussion of the question 'What is qualitative research?' emphasised, qualitative research is far from internally coherent with its multitude of opposed and contradictory metatheories. Quantitative methodology would seem to enjoy greater internal coherence than qualitative methodology, although it nevertheless contains a highly diverse range of metatheoretical ideas and methods.

The qualitative literature provides several characterisations of the supposed differences between quantitative and qualitative research, which also serve to

illustrate the many levels of the QQD (see Hammersley, 1992; Lincoln & Guba, 1985; Oakley, 2000; Tolich & Davidson, 1999; Shaw & Gould, 2001). Bryman's (1988) discussion of the differences between quantitative and qualitative research demonstrates that these differences can be greatly reduced, and can be further reduced beyond Bryman's analysis. For example, one dimension in Bryman's analysis is 'The role of qualitative research'. Bryman (1988) notes that the main role for qualitative research within quantitative research is preparatory because "quantitative researchers rarely totally deny the utility of qualitative research" (p. 94). Qualitative research is used to generate ideas and hypotheses, explore a topic in a less structured way, or act as a creative prelude to the main quantitative event. This restricted view of qualitative research is what most qualitative writers rail against, because it is seen as regarding qualitative work as second rate and not justifiable in its own right. However, in some research contexts quantitative research can be seen as preparatory to qualitative research (Miles & Huberman, 1994). For example, a quantitative survey may be used to identify a range of health concerns in a demographic group (e.g., the exercise regimes of 58-year-old men), but in-depth interviewing may then be used to explore the nature of the specific health concerns (e.g., snacking, attitudes to exercise, body image, time spent watching movies, and knee injuries).

Alternatively, according to Bryman (1988), the qualitative view of the role of qualitative research focuses on ways to explore actors' subjective interpretations, although in fact this is only one function that potential qualitative research can perform. Moreover, participants' interpretations are not excluded from quantitative inquiry. Quantitative researchers use different methods to establish how people attribute meanings and motives to their actions. For example, quantitative researchers in cognitive psychology are deeply concerned with such matters. It is also true that qualitative research does not act universally or solely to represent the views of its research participants. The interpretation and views of the researcher are just as important. One might well ask how qualitative

researchers are to provide recommendations and future hypotheses if they do not interpret the views of their participants?

Outside the comparative tables (i.e., Bryman's, 1988; Hammersley, 1992; Lincoln & Guba, 1985; Oakley, 2000) the differences between qualitative and quantitative paradigms are generally exaggerated and the similarities overlooked. These tables highlight the considerable overlap between supposedly distinct qualitative and quantitative approaches. They also emphasise the need to consider the QQD on multiple levels if feasible ways to use mixed methods are to be found, and multiple confusions avoided. An approach that does not artificially separate qualitative and quantitative research has a lot to recommend. This possibility is now examined.

4.3.2 The methodologically pragmatic view of the qualitative-quantitative debate

Methodological pragmatism generally views the differences between quantitative and qualitative methodology to concern only technical issues, and maintains that if technical problems can be overcome, all methods are available to the researcher (Bryman, 1988). On this view, the metatheoretical differences between qualitative and quantitative research are either ignored or considered secondary to the selection of methods. On the pragmatic view, qualitative and quantitative methodologies and methods can work together (either sequentially or concurrently) if the nature of the research question and context favour this as the appropriate approach. Hammersley (1996) suggests that qualitative and quantitative methods are currently used together in three ways: as complementary (i.e., to augment the ability of the other to gain research insights), facilitative (i.e., to create hypotheses for each other), and to promote triangulation (i.e., each will overcome or limit the deficiencies of the other). Mixed qualitative and quantitative methods are applied depending on the skills and experience of the researcher, the timeframe, the overall aim of the study, and the resources available. There are also two versions of methodological pragmatism, which are

separated by the different roles they assign metatheory. The first version is naïve pragmatism, which largely rejects the role of metatheory. The second version is situational pragmatism, which makes metatheory dependent on the choice of methods. A distinction is not usually made between the two types of methodological pragmatism, but it is helpful to do so given the very different role for metatheory in each version.

Naïve pragmatism

The naïve pragmatist approach is driven by the need to select the most appropriate methods for the research context. Naïve pragmatism holds that metatheory does not meaningfully influence the choice and composition of the appropriate methodology and methods (Tashakkori & Teddlie, 1998; Watts, 1992). For example, Patton (2002) recommends that using qualitative and quantitative methods, and mixed methods, tactically to answer specific research questions without recourse to "deep epistemological reflection" (p. 69). Patton does not explicate why it is favourable to avoid epistemological reflections, although such a statement is in keeping with his well-known utilisation-focused approach to evaluation, which places a heavy emphasis on the utility of the information generated in the evaluation. In the hurly burly of the research, Patton rejects the role of metatheory as an unnecessary abstraction that does little to help, and much to restrict, the researcher already operating under the constraints of time, budget, and the pursuit of the best line of inquiry. While it is accepted that utility is a vital component of evaluation research, and helps focus the tactical selection of methods, it does not necessarily preclude epistemological considerations. From a naïve pragmatic point of view, the QQD is over (e.g., Patton, 1990, 1997; Tashakkori & Teddlie, 1998; Salomon, 1991). This view is commonly based on the belief that most social scientists accept the use of a mixed methods approach where qualitative and quantitative methods can be employed in the same study (Brewer & Hunter, 1989). In this regard, Patton

(2002) comments, "While one may still encounter people who rigidly confess allegiance to only quantitative or qualitative methods, most practitioners appear to have become eclectic and pragmatic" (p. 71). However, if a methodological détente does exist, some of the intellectual combatants have not been informed (e.g., Becker, 1996; Denzin & Lincoln, 2000). The paradigm battles seem to be continuing in a number of fields, including methodological papers in qualitative research journals. Those authors who argue for the end of the QQD are most evident in the mixed method or evaluation literature. In psychology, the QQD has yet to be properly engaged.

Situational pragmatism

Situational pragmatism understands qualitative and quantitative research to be commensurate, but unlike naïve pragmatism believes that there is an important role for metatheory. However, situational pragmatism maintains that metatheory should follow the pragmatic needs of the research context. Methods are chosen first and metatheory is applied later in the data analysis or interpretation phases, depending on the methods used. Shadish (1995a) describes his view of this approach:

> Long ago in evaluation, both qualitative and quantitative theorists (and those in between) seemed to reach agreement that the methods we choose to use in evaluation do not depend in any direct or deterministic way on the philosophy of science we happen to endorse (Guba & Lincoln, 1982; Reichardt & Cook, 1979; Smith, 1986). In fact, it seems more likely that in many (perhaps most) cases the methods preceded the philosophy, and we added the philosophy as we tried to understand, explain and justify why we chose the methods we did. (p. 74)

What is more, the metatheory applied after data collection may vary from research context to research context depending on the methods employed. Situational pragmatism avoids the 'linear' approach of the fundamental differences view (where metatheory leads to methodology which leads to methods) and operates philosophically on a case-by-case basis or context-by-context basis. Seale (1999a), for example, says, "I regard research as a craft skill, relatively autonomous from the requirement that some people seem to want to impose that it reflect some thoroughly consistent relationship with a philosophical or methodological position" (p. 17). The value of metatheories are still recognised but seen as "resources for thinking rather than problems to be solved" (Seale, 1999a, p. 25). Situational pragmatism receives widespread support in the qualitative literature (e.g., Hammersley, 1996; Kvale, 1996; Seale, 1999a). For example, Hammersley (1996) argues that methods are best selected before consideration is given to the metatheory in order that the researcher be most sensitive to the nature of the research context.

A critique of methodological pragmatism

There are two main criticisms of the methodological pragmatist's approach. First, the relatively weak or, absence of a role for metatheory, and second, the uncritical use of mixed methods. Naïve pragmatism directly questions the relevance of metatheory in research, whereas situational pragmatism relegates the importance of metatheory and makes it dependent on method choice and research context. Without question, the qualitative researcher 'on the ground' is often forced to compromise (for example, half the sample may suddenly no longer be available due to unforseen circumstances), as is the experimental researcher, but this does not automatically lead to the need to reject or devalue metatheory. Metatheory's role is important because it provides a wide range of benefits. It allows researchers to acknowledge their assumptions about what counts as knowledge and be consistent in those assumptions and the methods that stem from them. Metatheory strongly influences how one should employ appropriate research strategies and the interpretation of the conclusions that

result from research. Metatheory also provides the criteria for evaluation of research. It serves to guide the focus of the research, whether, for example, the research is looking for causal patterns, or the Verstehen of research participants. Relegating the metatheory, or applying it retrospectively, limits our ability to understand how the research is to be applied and how to interpret its results[35].

The second main criticism of methodological pragmatism is its potentially uncritical use of mixed methods. It is accepted that employing a mixed methods approach generally leads to a better quality of research, and this thesis does not seek to contradict that understanding. A mixed methods strategy allows the researcher to approach a research issue in multiple ways, increasing the likelihood of understanding the issue. Mixed methods provides research participants different ways of expressing themselves, and generates the opportunity to analyse data in potentially more revealing ways. The ability of qualitaitve and quantitative research to 'build' on each other as part of a single research design is a another very strong methodolicial benefit of a mixed methods approach.

However, it is worth noting that using qualitative and quantitative methods together can beg several questions that typically go unconsidered. Methods can be seen to carry metatheoretical and methodological imperatives that are difficult to ignore. For example, using an interview-based approach and an experimental design in the same study may raise the question of the compatibility of the search for Verstehen and causality. Furthermore, the question of what criteria of evaluation should be applied to mixed method studies might also arise. Typically in the qualitative literature the traditional criteria of research evaluation are not seen as readily applicable to qualitative research (Madill et al., 2000), although this thesis sees this view as an underestimation of the validation worth of some qualitative methods. There are many alternative qualitative-oriented criteria

[35] The arguments for the role of metatheory are expanded upon in detail in chapters six and seven.

available, but it would seem to be metatheoretically contradictory to apply different kinds of criteria to different methods in the same study. If the quantitative component is evaluated using criteria based around validity, and the qualitative component employs the criteria of dependability and credibility it would be difficult to integrate the research's findings, and offer a coherent interpretation.

A point to be made here is that a study may be improved by the use of mixed methods but it may also be hindered or confused by using mixed methods (Shaw & Gould, 2001). The qualitative and quantitative findings may not agree, and may even contradict each other. It is possible for either qualitative or quantitative research to lose effectiveness if mixed with the other. Qualitative and quantitative methods should not be assumed to be compatible. Often it is incorrectly taken for granted that quantitative and qualitative methods will automatically overcome each other's weaknesses (Carey, 1993; Tashakkori & Teddlie, 1998). However, as Bryman (1988, 1992) convincingly argues, a careful blending of qualitative and quantitative methodology in specific research situations generally improves the quality of the research.

There is a considerable and convincing literature that argues for the effective use of mixed methods. For example, Silverman (1985), Patton (1990), and Miles and Huberman (1994) demonstrate the concurrent use of qualitative and quantitative research. Reicher and Emler (1986) use a quantitative method to improve the power of qualitative interviews. Under Miles and Hubermans' (1994) transcendental realism, qualitative and quantitative methods are taken to work together under the traditional criteria of research evaluation, without limiting the role of qualitative research. Thus, although the application of mixed methods is generally helpful, this thesis choses to raise the issue that a mixed method approach is not an automatic improvement to the research design.

4.4 Conclusions: Possible resolutions to the qualitative-quantitative debate

Neither of the two forms of the fundamental differences view, nor the two forms of methodological pragmatism, present a convincing approach to the QQD. The fundamental differences view does not stand up to scrutiny because there is a significant overlap in the methodology and metatheory of qualitative and quantitative research. Methodological pragmatism brings qualitative and quantitative research together by devaluing metatheory, or making it secondary to the practical problems of implementing research. Atkinson, Delamont, and Hammersley (1988) suggest that a better approach is to recognise that the qualitative-quantitative distinction does not reflect the "untidy realities of real scholars" (p. 243), and is a "poor methodological guide" (Hammersley, 1996, p. 173). Hammersley (1996) suggests that the diversity of method, methodology, and metatheory used by researchers is better reflected by focusing on five aspects of research rather than adhering to a qualitative or quantitative position. These five aspects include formulating the problems, selecting the cases, producing the data, analysing the data, and communicating the findings. With each of these five aspects, the researcher is encouraged to consider the range of methods, methodologies, and metatheories that are appropriate. Hammersley hopes a focus on these questions will stimulate researchers to move freely between the qualitative and quantitative paradigms, whilst attending to the practicalities of research.

Hammersley is clear that the quantitative-qualitative distinction cannot simply be rejected, because we have no viable alternatives to these terms. However, Dreher (1994) suggests that the terms 'qualitative' and 'quantitative' be discarded, at least in the context of research proposals, because they offer an overly simple classification of research that detracts from the need to specify data collection, data analysis, and procedures for validity. It may be, as Krantz (1995) argues, that some aspects of the QQD are not resolvable because the QQD is driven more by the social psychological nature of scientific controversy than by

any metatheoretical reflection. Therefore, Krantz argues, researchers should aim to be tolerant of methodological pluralism and different metatheoretical positions, rather than strive to resolve the QQD.

The evaluation literature has focused on the QQD for considerably longer than psychology has. That literature has reached a position that firmly accepts methodological pluralism (Greene, 2001; House, 2001; Pawson & Tilley, 2001). The practice of evaluation is now strongly characterised by qualitative as well as quantitative approaches, and the advent of qualitative methods is seen as one of the most worthwhile developments in the discipline (Shadish, 1995a). This is not to say the evaluation literature is free of the QQD, but evaluation research does make fulsome use of qualitative approaches (Mark, 2002). Other social sciences, such as anthropology and sociology have largely worked through the QQD to the point where, although some of the key issues have not been fully resolved, the value of methodological pluralism has been endorsed as more important than the debate itself.

The same outcome may eventuate in psychology, although psychology has thus far shown itself to be considerably more resistant to qualitative research than other social sciences. However, this thesis suggests that there is another approach to resolving the QQD. In the language of the QQD, this thesis recommends a form of situational pragmatism, but in effect it aims to achieve Hammersley's (1996) goal of greater movement between qualitative and quantitative methodology, and also to stress the need for the transparent explication of the following: the metatheoretical position of the researcher; the relationships and congruence between the metatheory, methodology, and method to be employed; and a specification of the strategies being used to ensure rigour, and, that the appropriate evaluative criteria that are employed (Caelli, Ray & Mill, 2003). The idea, and in some cases plea, that researchers set out their metatheoretical views before, or as they are choosing, their methodology and methods is regularly made in the qualitative literature (e.g.,

Denzin & Lincoln, 1994[36]), but few qualitative researchers have responded to it (Madill et al., 2000).

Researchers need to make the reasons for their choice of methodology and methods explicit, and clarify how the methodology and methods relate to the metatheory so those who read their work can better understand and judge the quality and intent of the research. This approach does not restrict the researcher's open consideration of different methods, methodology, and metatheory, but specifically requires the researcher to consider the coherence of metatheory, methodology, and methods in his or her approach. For example, the researcher may adopt a scientific realist metatheory, employ a qualitative methodology centred on grounded theory, and use face-to-face interviews augmented with observational data. The metatheory, methodology, and methods may need to be mutually adjusted during the research or as a consequence of it, and these processes should be reported and made overt. As part of the metatheoretical, methodological, and methods 'package' the researcher also needs to state what evaluative criteria are being employed, and by what strategies rigour is being maintained. To continue the example from above, the evaluative criteria employed in the grounded theory research could be the validity and reliability criteria, which would be met through the strategies of constant comparison analysis, negative case analysis, theoretical sampling, saturation, and theoretical memos, although other procedures such as member checks might also be relevant.

This approach is similar to that recommended by Hammersley (1996) and Denzin and Lincoln (1994) in that it aims for the more formal consideration of metatheory and its relationship with methodology and methods. However, it most closely

[36] Denzin and Lincoln (1994) set out five phases in the research process: locating oneself in the research area, and the broader historic and psychosocial context of the research; choosing a theoretical paradigm to inform and guide the study; selecting a strategy of inquiry to link that paradigm to the empirical world; selecting data collection and analysis methods; and, the art of interpretation (pp. 12-15).

approximates Caelli et al (2003) because it also includes a focus on strategies to ensure rigour. Contrary to Hammersley's (1996) suggestion, it would seem impractical to reconsider metatheory, methodology, and methods at each of his five different points. The best time for researchers to make their metatheoretical positions known is before the research design is implemented. This role for metatheory suggests a broad revision to research practice, because very few researchers explicitly state their metatheoretical positions either before or after the research is carried out. However, one danger with this approach is the potential for the occurrence of a form of retrospective relativism, whereby researchers tailor their metatheory to be consistent with the choice of methods or the nature of the findings. It is suggested that researchers are likely to have relatively consistent views on metatheory, although researchers may need to adapt these views if a particular research study demands it. It would seem highly unlikely that researchers would adopt a postmodern constructionist position one week, and then a scientific realist view the next.

To utilise the benefits of qualitative and quantitative methodology in the same study, the chosen metatheory must to be able to accommodate both qualitative and quantitative methodologies. It is argued in chapter seven that scientific realism can allow for both quantitative and qualitative methodologies. As part of this metatheoretical approach, the validity criteria of research evaluation would be applied to both methodologies. The argument that qualitative methodologies cannot, or should try not, to adhere to the validity criteria is rejected based on the evidence of three qualitative methods that meet these criteria. These methods are grounded theory (Glaser & Strauss, 1967), verbal protocol analysis (Ericsson & Simon, 1984/1993), and the theory of explanatory coherence (Thagard, 1989a, 1992). In the next chapter, these methods are examined in order to demonstrate that qualitative data can be scientifically evaluated. These methods also offer not one, but three, independently constructed bridges that connect qualitative methodology to quantitative, mainstream research in psychology. As such these methods stand as empirical evidence for the view that the QQD is artificial.

Chapter Five

Qualitative Data can be Scientific

> One matter that motivates an interest in qualitative research methods in psychology is the conviction that what people say (including what they say about their mental lives) is an important form of data, but a form that does not neatly fit the quantitative imperative. In this conviction, constructionists and naïve realists are alike united. What divides them are philosophical considerations about the relationship between what is said and reality. Constructionists believe that here there is an unbridgeable hiatus: what is said cannot ever express just the way things really are. Realists disagree. They believe that there is no hiatus here: sometimes things may be just as we say they are. (Michell, 2003a, p. 21)

5.1 Overview

In order to demonstrate that qualitative research can be as scientific as quantitative research, and to provide further evidence that the putative qualitative-quantitative divide can be bridged, three examples of qualitative method are examined in this chapter. The methods are grounded theory (Glaser & Strauss, 1967), verbal protocol analysis (Ericsson & Simon, 1984/1993), and the theory of explanatory coherence (Thagard, 1989a, 1992). These methods are strikingly dissimilar in their character, the knowledge areas they investigate, the research traditions they have evolved from, and the places within psychology where they are properly located, and applied. However, all three methods successfully use the validity and reliability criteria for knowledge claims.

Validity and reliability each have two important components: internal and external validity and internal and external reliability respectively. Internal validity can be understood as a criterion that indirectly approximates 'truth'. 'Truth' is characterised as a correspondence between language and the world that can

never be attained but "functions as a guiding ideal for science" (Haig, 2002a, p. 457). Truth itself cannot be directly accessed, but by using internal validity, truth can be indirectly indicated (Haig, 2002a, p. 457). Broadly defined, external validity is concerned with the extent to which the research's specific findings can be appropriately generalized. Often the quality of the external validity will relate to the effectiveness of the study's sampling procedures. There are two different views of sampling. First, in quantitative research an empirical-statistical approach to sampling yields generalisations that are often based on representative samples. Characteristics of the sample are generalised to a relevant population based on statistical inferences that the population will share similar characteristics (Schwandt, 2001). Second, in qualitative studies, a theoretical-analytic approach to external validity is usually preferred, most obviously in grounded theory, where sampling is based on the sample's relevance to the theory under development. For example, in a study assessing the impact on the lifestyle of a patient group of a diagnosis of very high LDL cholesterol, concomitant with Type I diabetes, hypertension, and central obesity greater than 46 inches, the grounded theory sample will comprise only people with this condition. Representativeness is seen as less important than obtaining a sample that helps evaluate the researcher's theory or hypothesis (Morse, 1991, 1999c; Schwandt, 2001). For example, the working hypothesis may be that such patients do no significantly change their lifestyles as a consequence of such a diagnosis. The findings of the grounded theory are then taken to be generalisable to other situations where similar conditions exist (Morse, 1999c) - in this case, patients with this collection of risk factors

One component of reliability, internal reliability, is characterised in this thesis as "the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions" (Hammersley, 1992, p. 67). Reliability also refers to the situation where a different researcher uses the same methods in a different study to obtain the same or similar results (LeCompte & Goetz, 1982, p. 35). This part of reliability

can be called 'replicability', 'reproducibility', or 'external reliability'. Replication is a challenging goal for qualitative research (Morgan, 1996). There are multiple procedures to promote the ability of other researchers to replicate qualitative studies (e.g., audit trails, memoing, comprehensive documentation), but replication is a criterion that even rigorous qualitative methods struggle to meet (LeCompte & Goetz, 1982), unless key procedures provide the research community with documentation of a clear procedural path, and even then, the task of fully replicating a qualitative study could be too complex to be feasible

Qualitative methods are as potentially scientific as quantitative methods if they meet the criteria of validity and reliability. Equally, quantitative research methods are not seen as having a "golden key" that automatically accesses reliability and validity (Silverman, 2000, p. 176). Like qualitative research methods, they need to be employed rigorously and with skill to meet these criteria. Fielding and Fielding (1986) note that "Whether the data collected are quantifiable or qualitative, the issue of the warrant for their inferences must be confronted" (p. 12). If a number of disparate qualitative methods can be shown to adhere to validity and reliability criteria in the same manner as quantitative methods, then those qualitative approaches procedures can be argued to be as scientific as quantitative research. However, this is not to say that all qualitative methods are therefore legitimised. Indeed, unlike the three qualitative methods examined in this thesis, other qualitative methods (such as the focus group method, and narrative methods) appear to lack the rigour needed to meet validity and reliability criteria.

The argument that qualitative researchers use validity and reliability criteria for knowledge claims presupposes that these criteria are the most appropriate for qualitative methods. This is not currently a popular view in the qualitative literature, where considerable attention is given to developing alternative criteria for qualitative research (e.g., Guba, 1981; Leininger, 1994; Lincoln & Guba, 1985), in order that qualitative research can fully employ what are seen as its

strengths in flexible, adaptive methods, empowering the respondent to express themselves as the respondent would most prefer to, and take into consideration the subjective experiences and insights of the researcher. More controversially, this thesis argues that the three qualitative methods to be examined should aim to meet the validity and reliability criteria. In the qualitative literature, it is generally believed qualitative methods fail if evaluated by the validity and reliability criteria. Therefore, the qualitative 'paradigm' is seen as distinct from quantitative inquiry and requiring different evaluative criteria. Consequently, there has been a remarkable proliferation of alternative criteria with which to evaluate knowledge claims made by qualitative researchers, but no alternative set of criteria has been widely adopted (Seale, 1999a). Moreover, qualitative researchers have not been able to explain their inability to address the supposed inappropriateness of the traditional validity criteria (Banister et al., 1994). The problem of how to assess the adequacy of qualitative work is unresolved with no foreseeable resolution in the near future (Angen, 2000; Denzin & Lincoln, 2000; Schwandt, 1996[37]). Advocates of relativism have proposed that each metatheoretical position should employ its own 'native' criteria. This 'horses for courses' approach raises a range of problems, not the least of which is how one might compare the knowledge claims of different positions.

This thesis argues that qualitative research is best served by returning to the use of the criteria of validity (Morse et al., 2002)[38], because the validity criteria (including reliability) are stronger criteria than any alternative criteria proposed for qualitative research. It is further suggested that the application of these criteria should also promote the greater use of qualitative research within psychology. Qualitative researchers do face a special challenge in demonstrating to their

[37] Schwandt (1996) argues that the debate about criteriology is not productive. He suggests that social inquiry needs to be undertaken not by using any criteria, but employing a "guiding ideal" and a "set of enabling conditions" (pp. 63-64). This ideal and the enabling conditions is thought to promote a practical and pragmatic postfoundational philosophy that will help researchers to "exercise moral and political judgment" (see Schwandt, 2002, p. 94).

[38] Other qualitative commentators have advocated qualitative research should never discard the validity criteria (e.g., Hammersley, 1998, pp. 67-68; Silverman, 2000, p. 175).

readership and themselves that their conclusions are the result of critical and rigorous investigation, and are not merely anecdotal (Silverman, 2000). However, qualitative research can adhere to the criteria of validity through the use of a number of rigorous and systematic procedures that have been developed by qualitative researchers (e.g., constant comparison analysis, negative case analysis, theoretical sampling).

Madill et al (2000; see also Sparkes, 2001; cf. Henwood, 1996; Reicher, 2000) recently offered a different view on the use of alternative and traditional validity criteria in qualitative research. They argued that the traditional evaluative criteria for knowledge claims are appropriate in qualitative research if the researcher employs a scientific realist or naïve realist metatheory. Madill et al (2000) proposed that alternative qualitative criteria (e.g., credibility, dependability) are more appropriate for constructionist-oriented qualitative research. This thesis does not support this relativistic approach because Madill et al's argument supports the development of separate metatheoretical and methodological camps, and does not allow comparative evaluation of research studies and their findings.

In chapter seven it is suggested that the criteria of validity and reliability used in quantitative research should be augmented by further criteria. Under the doctrine of epistemic realism proposed in chapter seven, Kuhn's (1977) criteria of theory evaluation (i.e., accuracy, consistency, scope, simplicity, and fruitfulness) are included in validity considerations. The role of Kuhn's criteria in evaluating knowledge claims are discussed in chapter seven.

Grounded theory, verbal protocol analysis, and the theory of explanatory coherence will each be examined in order to establish their ability to meet the criteria of validity and reliability. First, however, the question of why qualitative researchers tend to reject the traditional criteria of validity and reliability in favour of new alternative criteria is specifically examined, and contrasted with the

position of this thesis that the criteria of validity and reliability are still highly relevant to qualitative research.

5.2 Qualitative researchers' rejection of reliability and validity

The importance of the validity criteria in the qualitative criteriology literature has slowly but steadily eroded over the last twenty years (Morse et al., 2002). The diminishment of the importance of these criteria is usually based on the view that reliability and validity are too narrowly defined to be appropriate for qualitative research (e.g., Corbin & Strauss, 1990; Kirk & Miller, 1986; LeCompte & Goetz, 1982; Reason & Rowan, 1981; Whittemore, Chase & Mandle, 2001)[39]. Reliability and validity are assumed to represent both a quantitative and a positivistic outlook (Angen, 2000; Charmaz, 2000; Schwandt, 2002). In such an outlook, measurable and high correlations between scores, raters, or different occasions are required to claim reliability. Validity requires measures such as strong positive correlations in the form of validity coefficients between, for example, test scores and some external criterion (e.g., a correlation between an IQ test and university grades). Because qualitative research does not usually measure attributes, it is assumed by many qualitative researchers to be unable to provide support in the form of reliability and validity[40]. Therefore, the qualitative literature strongly tends towards the view that reliability and validity need to be redefined to allow for what is seen as the flexible and creative benefits of employing qualitative approaches (Agar, 1986; Kirk & Miller, 1986; LeCompte & Goetz, 1982). Hence the profusion of alternative qualitative criteria.

Furthermore, metatheories that are supported in the qualitative literature (e.g., postmodernism, social constructionism) tend to reject the ideas that underpin the validity criteria. These metatheories reject the use of reliability and validity

[39] Qualitative researchers in Europe and the United Kingdom are more likely to use reliability and validity compared to qualitative researchers in North America. In North America, the use of the alternative evaluative criteria is more usual (Morse et al., 2002; Silverman, 2000).

[40] There are however important exceptions, for example, verbal protocol analysis measures inter-coder reliability to assess the reliability of its encoding process (Green, 1995).

because they are assumed to be dependent on a concrete and stable view of 'truth' (i.e., there is a reality out there to be discovered, and it can be consistently discovered). Qualitative researchers often discount this view of 'truth' because they assume it does not allow for different realities and the idiosyncratic construction of reality by researchers and research participants. For example, Bernstein (1983) supports this position in his claim that, "there is no permanent, ahistorical framework to which we can ultimately appeal in determining the nature of rationality, knowledge, truth, reality, goodness, or rightness" (p. 8). In the qualitative criteriology literature, the supposedly quantitative criteria of reliability and validity are taken as the criteria of positivistic thinking (Altheide & Johnson, 1994), and therefore to be avoided (Lincoln & Guba, 1985). Again, qualitative writers overlook the decline of positivism and other forms of empiricism and the evolution of the postpositivist/empiricist alternatives in response to the justifiable criticisms of positivism/empiricism. However, as Seale (1999a) suggests that, in relation to the role of the traditional evaluative criteria, "We do not have to abandon skills developed under one paradigm because another paradigm has come along" (p. 466).

Qualitative researchers have proposed, and continue to seek, alternative criteria to reliability and validity that are believed to be more appropriate for their research. Arguably, the most well known of the alternative criteria is Lincoln and Guba's (1985) notion of 'trustworthiness'[41] which comprises four criteria - 'credibility', 'transferability', 'dependability', and 'confirmability'[42] - to which the 'authenticity' criteria have been added (Guba & Lincoln, 1989; Lincoln & Guba, 1986)[43]. As is typical of the early statements of alternative criteria, Lincoln and

[41] Lincoln and Guba's (1985) concept of 'trustworthiness' is intended as a synonym for rigour.

[42] 'Transferability' and 'dependability' were originally 'fittingness' and 'auditability' respectively (Morse et al., 2002).

[43] The authenticity criteria are, 'fairness', 'ontological authenticity', 'educative authenticity', 'catalytic authenticity', and 'tactical authenticity' (Guba & Lincoln, 1989; Lincoln & Guba, 1986). Guba and Lincoln (1989) introduced these criteria because they did not "parallel" the traditional criteria, as did the trustworthiness criteria, but reflected a constructionist approach to research, and in particular, research using case studies.

Guba's (1985) criteria approximate the traditional criteria of reliability (dependability), internal validity (credibility), external validity (transferability), and objectivity (confirmability). Since Lincoln and Guba's (1985) introduction of the trustworthiness criteria, the multitude of alternative criteria that have been proposed has not helped resolve qualitative research's inability to satisfactorily provide a justification for rejecting the validity criteria. This is a point some qualitative writers openly accept (e.g., Banister et al., 1994) arguing that this is because there is no clear argument that has emerged that justifies the rejection of the validity criteria. However, postmodernist writers have sought to promote the relativistic idea that each metatheory should have its own evaluative criteria (Seale, 1999a). Whittemore et al (2001) describe Lincoln and Guba's promotion of alternative criteria, as starting a process that has led to an "epistemological quagmire" in qualitative research (p. 523). There is now a remarkable range of different and opposing positions on the nature and place of evaluative criteria within qualitative research (Altheide & Johnson, 1994; Seale, 1999b). Seale (1999a) argues that it is the nature of qualitative research to value flexibility and creativity, and that this is strongly at odds with the perception of quantitative researchers always setting and adhering to the same set of evaluative criteria (p. 467). It is generally accepted in the qualitative research literature that the struggle to find appropriate criteria continues (Denzin & Lincoln, 2000; Guba & Lincoln, 1994; Seale, 1999b).

By contrast, this thesis suggests that the criteria of validity are still highly relevant to qualitative research. The use of validity criteria offers the best way forward for qualitative research to resolve the criteriology debate, to legitimise qualitative research, and to ensure its rigour.

Additionally, the 'internal' search for reliability and validity by the researcher during the research should be stressed. With the gradual rejection of the validity criteria by qualitative researchers there has been a steady shift towards the evaluation of completed research by external agents employing procedures such

as audit trials, member checks, and peer reviews (Morse et al., 2002). Morse et al (2002) describe the need to employ rigour-enhancing 'mechanisms' within the qualitative process:

> These mechanisms are woven into every step of the inquiry to construct a solid product (Creswell, 1998; Kvale, 1989) by identifying and correcting errors before they are built in to the developing model and before they subvert the analysis...Data are systematically checked, focus is maintained, and the fit of data and the conceptual work of analysis and interpretation are monitored and confirmed constantly. Verification strategies help the researcher identify when to continue, stop or modify the research process in order to achieve reliability and validity and ensure rigour. (pp. 9-10)

The criteria of trustworthiness (Lincoln & Guba, 1985), for example, promote strategies that attempt to evaluate rigour (e.g., member checks) but these do not necessarily ensure rigour (see Morse et al., 2002, pp. 8-9). Member checks, also known as respondent validation, involves some form of feedback to the respondent by the researcher as to what the respondent's issues are, and what his or her interpretation is. Therefore, the respondent, not the researcher, becomes the arbiter of the quality of the information. In this situation problems may arise, for example, he respondent may, or may not, understand the researcher's interpretation Qualitative researchers also need to ensure that the onus for rigour lies with the researcher as part of a critical peer group and not just with an external agent. The researcher is best placed to act to handle validity issues as they arise, and should not have to rely on others for the impetus to act.

In the last part of this section, several arguments are made in support of the view that qualitative researchers are better served by using the validity criteria. First, the progress of science is aided by a critical community of scientists who broadly agree on the evaluation criteria to be applied to research (Hammersley, 1992; Popper, 1962). The validity criteria are the best candidates for criteria that can

be applied by all researchers. It is reasonable to suggest that quantitative researchers share a more or less common view of what constitutes validity (although this concept has its own share of controversy). Alternatively, the availability of a large number of qualitative criteria has the affect of relativising judgments about research, which in turn helps to maintain largely artificial distinctions between qualitative and quantitative research. If qualitative and quantitative approaches to research, and individual qualitative methods, have their own tailored criteria, then it is an enormous task to see how knowledge claims can be compared within qualitative research, or judged across qualitative and quantitative studies. The quantitative operationalisation of reliability and validity typically requires certain measurement procedures, but the respective values that underpin reliability (i.e., stability, consistency) and validity (i.e., epistemic worth), can be applied in a way that meets the needs of qualitative research without the use of measurement procedures (Morse, 1999b). Aside from the issue of measurement, qualitative researchers will promote their methods more effectively by arguing that qualitative methods are similar to quantitative methods on the grounds that they can be reliable and valid. The wide range of procedural checks, cross-examinations of data, and record keeping in some qualitative methods makes them strong candidates to confer validity on knowledge claims.

Some of the many procedures used to ensure rigour and promote validity and reliability in qualitative research are the following: constant case comparison, memoing, negative case analysis, inter-encoder checks/agreement, audit trails, respondent validation (or member checks), peer debriefing, deviant case analysis, persistent observation, investigator responsiveness, peer analysis/review, checking for researcher effects, full transcription, theoretical sampling (and/or sampling adequacy), adhering to the refutability principle, progressive subjectivity, structural corroboration, rigorous fieldnote conventions, tabulations, and category saturation (and/or comprehensive data treatment) (Bloor, 1983; Clavarino, Najman & Silverman, 1995; Glaser & Strauss, 1967;

Guba & Lincoln, 1981, 1982, 1989; Kirk & Miller, 1986; Lincoln & Guba, 1985; Miles & Huberman, 1984; Morse, 1991; Morse et al., 2002; Schwandt & Halpern, 1989; Silverman, 2000; Strauss & Corbin, 1990). When the most systematic and rigorous qualitative and quantitative methods are compared, it is not easy to discern which type is the more rigorous (Azar, 1999).

Typically, in the qualitative literature triangulation also is offered as a procedure for promoting validity (e.g., Denzin, 1978; Gliner, 1994; Miles & Huberman, 1984). However, in this thesis triangulation is not enthusiastically recommended for qualitative research as a rigour-enhancing procedure because it is an ill-understood methodological double-edged sword. Triangulation can just as easily reduce the level of validity as increase it (Fielding & Fielding, 1986). Using two data collection methods (the most common form of triangulation in qualitative research) to research the same issue may provide consistent and complementary findings. Alternatively, the outcome may be two sets of contradictory findings that present two different versions of the research issue. The discussion of triangulation in the qualitative literature tends to be enthusiastic about its genuine potential virtues, for example, greater and more diverse insight, coverage of the weaker elements of the other method, without noting its potential disadvantages.

As part of this argument to promote shared evaluative criteria (Forbes et al., 1999), the use of the same terminology for criteria as mainstream science is more than a cosmetic change. Sharing the same terminology should encourage greater interaction in the use of qualitative and quantitative methods between qualitative and quantitative researchers, and should serve to promote the funding of qualitative research by enhancing the scientific legitimacy of qualitative research (Morse et al., 2002).

The second argument in favour of the use of the validity criteria by qualitative researchers' is that the new qualitative criteria are weaker and different versions

of reliability and validity. Phillips (2000) demonstrates the weakness of the new criteria when he compares 'credibility' (Lincoln & Guba, 1985, p. 301) with validity. Credibility is shown to be a weaker concept than validity because of its uncritical acceptance of any research under certain circumstances. This argument is discussed in detail in section 5.4.

Third, the alternative criteria have not helped resolve the legitimation crisis in qualitative research (see Denzin, 1997), and do not appear to have promoted the use of qualitative research in psychology. Using the validity criteria should help in the promotion of qualitative research in psychology, where the validity criteria are typicaly accepted, and may help to defuse the legitimation crisis. Fourth, by emphasising the alternative criteria, qualitative researchers have inadvertently supported the view that qualitative research is unconcerned with reliability and validity, and even the idea that qualitative research is inherently unreliable and invalid (Morse, 1999b; Morse et al., 2002, p. 4). Qualitative researchers need to reclaim reliability and validity to dispel this myth. Lastly, re-employing the validity criteria helps emphasize the desirability of using strategies that promote rigour during the research process (e.g., negative case analysis) rather than after the research (e.g., an audit trial) when problems can be identified but not resolved (Morse et al., 2002).

5.3 Grounded theory

The first qualitative method to be assessed for its ability to make reliable and valid knowledge claims is grounded theory. The origins of grounded theory and its different interpretations are first characterised, followed by a detailed introduction to grounded theory's research procedures. This extensive background will enable an informed judgment to be made on grounded theory's capacity to employ the criteria of validity and reliability.

5.3.1 The origins of grounded theory

Glaser and Strauss (1967) originally developed grounded theory (GT) as an alternative qualitative approach to the dominant hypothetico-deductive, quantitative methods employed to investigate the 'great man' sociological theories of the time (Haig, 1996). In contrast to these quantitative hypothetico-deductive approaches, the key aim of GT is held to be the inductive generation of theory by 'everyday' researchers in order to understand empirical phenomena (Glaser & Strauss, 1967). GT also aims to legitimise qualitative research through the systematic application of rigorous procedures that allow the development of theory grounded in data (Glaser, 1978; Strauss & Corbin, 1990). GT provides an original and comprehensive approach to generating theories that goes beyond the scope of data collection and analysis methods. Since 1967, GT has continued to be developed, thus reinforcing its stature as a rigorously systematic set of inductive, and latterly deductive, procedures to explain data[44] (Strauss & Corbin, 1990, p. 24).

GT can be understood as a specific form of method. However, GT can be understood as a methodology, a general scientific method, and a form of substantive theory which result from GT research (Haig, 1996; B. D. Haig, personal communication, July 15, 2003). GT also allows for the complementary use of both qualitative and quantitative research (Glaser, 1992; Glaser & Strauss, 1967; Strauss, 1987). Neither Glaser nor Strauss sees a problem with mixing qualitative and quantitative research in GT. In fact, the first GT study was quantitative in nature (Glaser, 1964).

5.3.2 Grounded theory and psychology

GT has many applications in psychology, primarily in the areas of applied psychology, including, clinical psychology (e.g., Borrill & Iljon-Foreman, 1996; Wiersma, 2003), psychotherapy (e.g., Anderson, 2003; Bolger, 1999),

[44] The issue of whether GT produces a theory that explains data or a theory that merely describes data will be considered in this chapter.

psychological medicine (e.g., Green, Galvin & Horne, 2003; Wilson, Hutchinson & Holzemer, 2002), industrial and organisational psychology (e.g., Crook & Kumar, 1998; Halme, 2002), community psychology (e.g., Pilowsky, 1993), and health psychology (e.g., Swanson & Chenitz, 1993; Sque & Payne, 1996). There are recent examples of studies that combine a qualitative GT approach with other quantitative methods (e.g., Borrayo & Jenkins, 2003; Melville, Wall & Anderson, 2002; see Morgan & Stewart, 2002), but a literature search has been unable to find examples of qualitative and quantitative GT methods used within the one study. Henwood & Pidgeon (2001) is a partial exception. They integrate qualitative and quantitative procedures within a focus group approach but only apply an adapted grounded theory methodology to their data analysis procedures (Henwood & Pidgeon, 2001).

5.3.3 The different interpretations of grounded theory

The original framework of GT has undergone separate development and clarification by Glaser (1978, 1992, 1998, 2002a & b), and Strauss and Corbin (Strauss, 1987; Strauss & Corbin, 1990, 1994, 1998). Glaser and Strauss and Corbin no longer agree on the best account of GT, and this has resulted in two distinct versions of the methodology (Stern, 1994). These Glaserian and Straussian versions of GT have markedly different views on some aspects of the GT research process, and the relevance of the traditional criteria of research evaluation. However, both versions of GT do share many similarities (e.g., the use of constant comparison analysis, theoretical sampling, and theoretical memos). In either form, GT is currently the most complete qualitative method available to social scientists, and arguably, the most commonly employed (Denzin, 1994)[45].

[45] A number of writers have noted that often only parts of GT are used in qualitative studies but the researchers still claim their approach is GT (e.g., Alvesson & Sköldberg, 2000). This practice provides a potentially misleading impression of the frequency of the use of GT. Even a cursory glance at the social science databases confirms the considerable variation in the degree of the application of GT procedures.

Glaser and Strauss and Corbin appear to make little, if any, use of methodological developments in the philosophy of science (Haig, 1996), and tend to view GT with an instrumentalist's philosophical detachment[46] (Corbin & Strauss, 1990; Strauss & Corbin, 1994). What they say about their philosophical leanings does not amount to a clear position in spite of the pragmatic and symbolic interactionist origins of GT. Corbin and Strauss (1990) acknowledge that GT is underpinned by pragmatism (in particular, Dewey, 1925, 1937, and Mead, 1917, 1934; see Corbin & Strauss, 1990, p. 5; Strauss & Corbin, 1994, p. 279) and symbolic interactionism (based on Park & Burgess, 1921; Hughes, 1971; and Blumer, 1969; see Corbin & Strauss, 1990, p. 5). However, Corbin and Strauss (1990) stress a researcher does not need to agree with pragmatism or symbolic interactionism in order to employ GT. Strauss and Corbin (1994) claim to specifically reject positivism, although their unusual understanding of positivism is contained in their comment, "A theory is not the formulation of some discovered aspect of a preexisiting reality "out there"" (p. 279). Following Addelson (1990), Strauss and Corbin (1994) stress a fallible, temporally limited, perspectivism. That is, the perspective of the researcher strongly influences the interpretation of the grounded theory (e.g., a researcher's values will play an inevitable role in the interpretation of data), but that this theory is inevitably fallible (i.e., no theory can be said to be error free), and will be reinterpreted and qualified over time and by other researchers (e.g., what is understood as the correct treatment for the cardiovascular condition Metabolic Syndrome is likely to be very different in twenty years time; Strauss & Corbin, 1994, pp. 279-281). The roles of historical and social contexts are also recognised. For example, very wealthy Torontoians could be said to differ in their perspective on Canada's relatively open immigration policy compared to the view of 'boat people' from the Dominician Republic. Likewise, a 15th century perspective on the need to politically enfranchise women would be greatly different from a modern

[46] Strauss and Corbin's instrumentalism is in line with Dewey's pragmatic view of instrumentalism (Rennie, 1998). Strauss and Corbin's instrumentalism can be seen as the view that the warranted assertability of research and research concepts lies in their ability to appropriately guide our actions in the world (Schwandt, 2001).

perspective (in many countries). In this respect Strauss maintains that "[the universe's] phenomena should be partly determinable via naturalistic analysis, including the phenomenon of men [and women] participating in the construction of the structures which shape their lives" (Strauss, 1987, p. 123). Charmaz (2000) notes that the metatheoretical position of Strauss and Corbin has become increasingly "theoretically diffuse" (p. 512).

Outside the writing of Glaser and Strauss and Corbin, there are several other interpretations of GT. Generally, these views are responses to the considerable antirealist criticisms of GT for its so-called 'positivistic' nature (Charmaz, 2000). The different metatheoretical interpretations of GT by Rennie (1998, 2000), Charmaz (1990, 1995, 2000), and Henwood and Pidgeon (1992, 1994; 1995, 2003; Pidgeon & Henwood, 1997), try to place GT in a metatheoretical position between realism and relativism (Rennie, 2000, p. 482), between positivism/empiricism/postpositivism and postmodernism (Charmaz, 2000, p. 510, p. 525), or between realism and constructionism (Henwood & Pidgeon, 2003, p. 134) respectively. Alternatively, Haig (1996) reconstructs GT in scientific realist methodological terms; arguing that scientific realism has responded to its antirealist critics and developed into more viable forms within which GT can operate. These four alternative approaches to the use of GT will be briefly introduced.

Charmaz (1990, 1995, 2000) argues for a constructionist approach to GT on the grounds that the grounded theory should be seen as a construction by the researcher and not the reflection of an objective reality (i.e., where an external and real world is assumed and the GT is 'discovered')[47]. Charmaz (2000) argues that, "Postmodernism can *inform* realist study of experience rather than simply serve as justification for abandoning it" (2000, p. 528, emphasis in the original).

[47] Charmaz (2000) contrasts her constructionist view of GT with 'objectivist' GT, which she characterises as accepting "the positivistic assumption of an external world that can be described, analyzed, explained, and predicted: truth, but with a small *t*" (p. 524). In the context of her article, Charmaz equates objectivism with realism.

For Charmaz, postmodernism has highlighted what realism needs to do to put its house in order. This involves "forc[ing] renewed awareness of our relationships with and representation of subjects" (p. 528), and a greater appreciation of the influence of psychosocial and historical factors on the interpretation of data. Charmaz wants grounded theorists of all persuasions to address the issue of reflexivity in their research.

Henwood and Pidgeon (1992, 1994, 1995, 2003; Pidgeon & Henwood, 1997) also propose a constructionist revision of GT. One of their key reasons for advocating constructionism is the need to address Hammersley's (1989, 1996) 'dilemma of qualitative method'. Hammersley's dilemma is his concurrent commitment in qualitative research to the use of rigorous scientific processes and the creative and interpretive investigation of data. Henwood and Pidgeon suggest the resolution to this dilemma lies with a form of constructionism. Henwood and Pidgeon (2003), like Charmaz, strongly support the view that "[t]heory cannot simply emerge from or reflect data, because interpretation and analysis is always conducted within some preexisiting conceptual framework brought to the task by the analyst" (p. 134).

Rennie (1998, 2000) applies a phenomenological, pragmatic, and inductive hermeneutical approach to GT that he calls 'methodical hermeneutics'. Rennie also draws on C. S. Peirce's theory of inference and the 'new rhetoric' (defined as "the art of persuading an audience to a point of view"; Rennie, 2000, p. 491), to further support his position. Rennie's approach to GT primarily aims at resolving the tension between relativism and realism in GT (Rennie, 2000, p. 482) in order to make GT more acceptable to a broader range of researchers. This approach is similar to both Charmaz's and Henwood and Pidgeon's approaches. All three approaches aim to retain both the systematic rigour and the creative interpretation in GT. However, unlike the other two interpretations, Rennie strongly rejects relativism.

Haig (1996) argues that scientific realism can also offer an alternative basis for GT. Scientific realism accepts the need for scientific rigour, and does not exclude the benefits of being creative and flexible as part of empirical research. With scientific realism, the application of procedures to promote rigour does not necessarily restrict the researcher's interpretation. Haig's (1996) application of his abductive account of scientific method provides a promising framework for the use of grounded theory within a scientific realist metatheory.

There is no single way of applying GT, and it is unlikely that there will ever be a standard form of GT (Henwood & Pidgeon, 2003, p. 151). The GT literature provides a large and rapidly expanding body of work that reflects Glaser and Strauss's (1967) original wish that GT be applied creatively and flexibly, and supports Charmaz's (2000) opinion that the understanding of GT should be contested. An examination of articles in the GT literature provides substantial evidence for the diverse and somewhat piecemeal application of GT (Stern, 1994). For example, there are 'abbreviated' and 'full' forms of GT. The former only applies selective coding in order to meet time or financial resource constraints (Glaser, 1992; Willig, 2001). For example, if the data collection method involved 25 interviews, only 15 of those interviews may be fully and formally analysed. However, abbreviated studies do generally follow the same set of GT procedures as the full version but do not employ open coding. Grounded theories can also be categorised as 'substantive' or 'formal' (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Substantive theories are developed for a substantive or empirical area (e.g., how should emergency medical teams provide care for severely injured patients?). Formal theories are developed for a formal or conceptual area (e.g., what is chronic pain?). The grounded theory procedures can lead to either type of theory, but normally a formal GT stems from a substantive GT (Alvesson & Sköldberg, 2000). The distinction between substantive and formal GT appears somewhat arbitrary and essentially refers to lower levels (i.e., substantive) and higher levels (i.e., formal) of generality within different grounded theories (Alvesson & Sköldberg, 2000, pp. 30-31).

5.3.4 The GT research process

Before considering GT's ability to meet the criteria of reliability and validity, the GT research process will be characterised with reference to both Glaserian and Straussian versions and, where relevant, the four alternative metatheoretical views briefly noted above. This characterisation follows the typical GT procedural path of focusing on the GT's area of study, data collection, constant comparison analysis and coding, theoretical memoing, negative case analysis and theoretical sampling, leading to category saturation. The problems GT faces by describing but not explaining its data, and its confusing procedural terminology and literature, are then discussed.

Focusing the GT's area of study

GT research studies do not share a common understanding of how circumscribed the area of study should be. Typically, GT starts with a relatively open research question or area of interest that does not burden the research with assumptions about the phenomena under study (e.g., what are patients' experiences when being comforted whilst in acute pain? Strauss & Corbin, 1990, pp. 37-40). Some users of GT prefer to begin with a specific set of research objectives but give themselves the freedom to then ignore or adapt those objectives. Both the Glaserian and Straussian versions of GT allow for the expansion or narrowing of the research area during the research if such change is judged appropriate. Overall, Strauss and Corbin (1998) have a more prescriptive position than Glaser. Strauss and Corbin argue that researchers can begin by explicitly raising specific questions of interest at the outset in order to guide the GT process. Glaser (1992) strongly believes that a researcher should avoid preconceived ideas and hypotheses, and undertake GT with "the abstract wonderment of what is going on" (p. 22). Glaser wants researchers to avoid contaminating data analysis by employing hypotheses from sources outside the data under study, although Glaser and Strauss (1967) accepted from the outset that the researcher was not a tabula rasa. Glaser (1992) argues that the existing

literature in the research area under study can be utilised, but not until the researcher reaches the end of the analysis process and is in the latter stages of constructing the grounded theory.

It is argued in this thesis that it is questionable to ignore the ideas of other researchers at the beginning of a research study. Researchers learn from the mistakes and successes of other researchers, and, potentially science is advanced through critical peer revision. Cutliffe (2000) states that the grounded theorist should consider the relevant literature before beginning a GT process because it "helps...conceptual density, enhances the richness of concept development, and subsequently the process of theory development" (p. 1481). Whilst the Straussian version does not wish to restrict the GT process with presuppositions, it has evolved to be more lenient towards the creation and verification of hypotheses and the role of questions at the start of and throughout the analysis process (Strauss & Corbin, 1998). This Straussian approach is more in line with the recent trend in qualitative research that supports a 'neither too loose nor too restrictive' view of initial question setting (Henwood & Pidgeon, 2003). The Straussian and Glaserian versions of GT have clearly separated on the question of how focused the initial area of interest needs to be. Whatever the research area or questions to be addressed, Henwood and Pidgeon (1995; Pidgeon & Henwood, 1997) sensibly emphasise the need for "setting realizable goals" in GT, particularly for researchers inexperienced with this approach. Research goals can be set to put intelligent and practical limitations on the GT, lest the researchers create overwhelming amounts of data, or try to address a research area that is too broad or complex.

From a realist tradition, Haig (1996) argues that GT can be profitably cast as a problem-solving endeavour (p. 282). Haig's (1996) suggested abductive framework offers a more scientifically cohesive and robust approach to researching problems in GT than either the Glaserian or the Straussian versions. Haig's maintains that conventional GT contains misunderstandings about the

scientific framing of research problems. These include conceptualizing methods and problems as different parts of the research project, establishing methods before the 'problem', and understanding problems as temporal phases of research (Haig, 1987, 1996). Both Glaser and Strauss see problem-solving as a key method of focusing GT. Glaser (1992, p. 4) emphasizes that problem-solving plays a critical role in directing the GT research process. Specifically, the detailed formulation of the problem can become a vital first step in the GT process because it guides the construction of the research approach based on its own formulation (Haig, 1996, pp. 282-283).

Haig (1996) argues that the abductive account of method offers a better approach to the selection and formulation of problems within GT. He deploys the constraint-composition account of problems within the abductive theory of method because it allows the researcher to "explain how inquiry is possible, and at the same time provide guidance for the conduct of research" (p. 282). Formulating the problem will greatly improve the ability of the researcher to formulate a solution to the problem. However, in Glaserian GT, and usually in Straussian GT, the method comes before the formulation of the problem, which emerges during data analysis (Brooks, 1997). Therefore, Haig's reconstruction of the role of problems in GT may appear prescriptive in the Glaserian version, but could be used in the Straussian approach. An initial statement of the problem does not have to be understood as prescriptive but as facilitative. The formulation of a research problem allows for the problem to be thoroughly developed through the use of GT procedures; the problem formulation does not determine the structure of the GT. Based on Haig's reconstruction of GT, Brooks (1997) notes "by thus ignoring the importance of the problem definition in researching the solution, Glaser and Strauss's methodology displays a misconception about the nature of scientific research" (p. 30).

Data collection in GT

Once the area, objective, or problem of interest is established, the grounded theorist can collect data through a wide selection of possible methods. Writers on GT do not normally prescribe what data collection methods should be used. Qualitative and quantitative approaches can both be accommodated, although GT almost always employs a qualitative approach to research (Strauss & Corbin, 1994). Generally, grounded theorists do not have much to say about specific data collection methods, a disinterest that borders on neglect. This may be because GT is dominated by a rigorous and innovative combination of data analysis methods. A relatively small number of in-depth, face-to-face interviews (N = 10-25) tends to be the most common method (Creswell, 1998), although there are many possible data collection methods that can, and have been, applied - for example, focus groups (e.g., Green, 1997; Henwood & Pidgeon, 2001; Poorman, 2002), in-depth interviews (e.g., Abrahamsson, Berggren, Hallberg & Carlsson, 2002; Wilson et al., 2002), semi-structured interviews (e.g., Giacobbi, Hausenblas, Fallon & Hall, 2003; McVey, Madill & Fielding, 2001; Timlin-Scalera, Ponterotto, Blumberg & Jackson, 2003) participant observations (e.g., Kimle & Damhorst, 1997), and text analysis (e.g., Pierce, 2000; see Schou & Hewison, 1998). Grounded theorists may prefer to limit their data collection strategies to lessen the complexities of the data analysis. Although this tendency is diminishing with many recent studies using multiple data collection methods (e.g., Friedlander, Heatherington & Maars, 2000; Karp & Tanarugsachock, 2000).

Constant comparison and open, axial, theoretical, and selective coding

In GT, data collection immediately leads to data analysis. Data collection and data analysis are best characterised as concurrent and interactive activities that proceed until the categories that have formed are saturated. As the data collection and data analysis begins, the researcher groups data (for Glaser 'incidents' are grouped) that share similar characteristics through the application of the process of constant comparison analysis that codes the data into categories. Constant comparison analysis means the researcher constantly

compares the similarities and differences in the data within and between the emerging categories. The comparison can be between any data that the researcher deems important, for example, between actions, times, people, and situations (e.g., the number of times a nurse comforts a patient, what form or forms of comfort are used, who else offers comfort etc). Constant comparison analysis is a rigorous and continuous process that aims to account for all the data and the relationships between the data. It also helps to keep the researcher focused on building a theory from the relationships within the data, and ground the theory.

For Strauss and Corbin (1990, 1998) and Glaser (1978, 1992) the first of the three coding processes within constant comparison analysis is open coding. In Straussian GT, open coding begins with conceptualising data to form concepts that are then labelled. Glaser prefers to describe open coding as the identification of incidents, which are conceptualised into subcategories and categories. For Strauss and Corbin concepts are then grouped to form categories, which are in turn named. Categories are further developed as data analysis continues and categories become more complex. Each category will have a list of stated properties. A category can also be 'dimensionalized'. Dimensionalizing is the placement of the category onto a range of dimensional continua in order to assess the scope of a category. Each category can have a 'dimensional profile' of several continua.

Open coding is essentially the progressively more specific and accurate labelling of concepts that evolve into denser categories, moving from initially broad and descriptive concept labels or codes to highly analytical codes. It can be considered the most important and basic procedure in GT because it clearly and specifically grounds the data (Strauss & Corbin, 1990). Open coding can be as specific as word-by-word or as broad as interview-by-interview, but is usually undertaken line-by-line. Glaser (1978) argues that line-by-line coding is a very important procedure, because it forces the researcher to stay close to the data,

and helps keep the researcher in touch with the participants' views. Glaser rejects what he sees as the over conceptualisation of data by Strauss and Corbin who suggest that coding each word can be appropriate (Glaser, 2002a, calls this "conceptual foppery", p. 11). If a researcher attempts to code every word or incident, the data analysis may become unmanageable (see Brooks, 1997, p. 20). The selective application of such a fine level of analysis is a better strategy. This is probably how Strauss and Corbin (1990, 1998) intended the finer open coding to be used (see Strauss & Corbin, 1990, pp. 72-73). Although neither Strauss nor Corbin have chosen to respond to Glaser's many vivid criticisms of their coding processes, they do make it clear that they do not intend their version of GT to be as prescriptive as Glaser and others such as Charmaz (2000) forcefully assert it to be. In this regard, Strauss and Corbin (1998) note, "We know that readers will treat the material in this book as items on a smorgasbord table from which they can choose, reject, and ignore according to their own "tastes" – and rightly so" (pp. 8-9). In relation to their data analysis procedures, Strauss and Corbin (1998) suggest, "These procedures were designed not to be followed dogmatically but rather to be used creatively and flexibly by researchers as they deem appropriate" (p. 13). However, it is typical of Strauss and Corbin's writing to stress flexibility but then to place what seems greater stress on specific procedural prescriptions.

A further consideration is Glaser's (1998) declaration that GT interviews should not be transcribed or even taped. He recommends this approach in order that the researcher can avoid being caught up in the minutiae of data. Researchers can better see the 'big picture' or the important 'patterns' in the data if they are not troubled with detailed transcripts. Glaser suggests that researchers can rely on their memories for the critical data (Glaser, 1996). This recommendation is not at odds with Glaser's recommendation for line-by-line analysis, because it is the data that have been recalled that are to be analysed line-by-line. This thesis accepts the qualitative researchers' need to be careful about the levels of data they generate, and, as Strauss and Corbin suggest, researchers need to apply a

fine level of analysis selectively. However, not to transcribe or even tape interviews is a highly questionable practice. Qualitative researchers need to be able to demonstrate exactly from where they generated their findings for their research to be considered valid and reliable. Exposing their data collection and analysis to the frailties of human memory threatens the prosecution of rigorous qualitative research.

Following open coding, Strauss and Corbin (1990) apply axial coding. Axial coding aims to make discoveries and connections between subcategories and categories, and between categories and categories, usually by using a coding paradigm (also known as a 'paradigm model'). These connections help the researcher build towards a theory (e.g., connections between the categories of verbal comfort and physical comfort). Significantly, Strauss and Corbin (1990) suggest that the grounded theorist use both inductive and deductive thinking to aid the axial coding process (p. 111). The coding paradigm employed in axial coding aims to identify the conditions or subcategories that give rise to each category (i.e., the context, action/interaction strategies, causal conditions, intervening conditions, phenomenon, and consequences of each category, Strauss & Corbin, 1990, pp. 99-108). Strauss and Corbin suggest that the coding paradigm should focus on the themes of 'process' and 'change' (see Strauss & Corbin, 1990, pp. 143-157). Glaser does not use axial coding through coding paradigms, preferring to engage in 'theoretical coding', which aims at coding the relationship between categories without recourse to superimposed coding frameworks.

Strauss (1987) initially recommended using a coding paradigm to help the researcher investigate how categories related to their data, but coding paradigms can have the affect of alerting researchers to other relationships in the data. Coding paradigms do have the virtue of helping the researcher establish what categories or category is most important in the identification of the emerging theory. Glaser (1992), amongst others, disagrees with the imposition of a pre-

constructed coding paradigm. He questions why the constructs of 'process' and 'change' should be assumed to be relevant and given priority by Strauss and Corbin. Glaser (1992) argues that a coding paradigm may be relevant but only when this is indicated by the data. There are many coding paradigms that can be helpful (Glaser, 1978, notes 18 families of codes), but in keeping with the original inductive intent of GT, the data are the most likely source for a coding paradigm. Melia (1996) describes the concerns with Straussian coding prescriptions as follows: "I always have a nagging doubt that the procedures are getting in the way; the technical tail is beginning to wag the theoretical dog" (p. 376). Glaserian grounded theorists fear that by relying too heavily on procedural prescriptions the flexibility of the GT process will be lost.

The next step in the data analysis process for both Glaser and Strauss and Corbin is selective coding. Selective coding is the refinement or 'delimiting' of the categories into a more parsimonious set of categories, and establishing the relationships between those categories. As a result, selective coding should generate a core category that systematically relates to all other categories. Strauss (1987, p. 36) provides criteria for the selection of the core category. As part of the selective coding process, the categories that require further refinement and development are improved (Strauss & Corbin, 1990, p 116). Glaser (1978, 1992), and Strauss and Corbin (1990, 1998) argue that the core category is critical to the emergence of GT. Alternatively, aiming for a core category can be unhelpful as, for instance, when a coding paradigm arbitrarily prioritises 'process' and 'change' data. The data analysis may result in a core category but it may alternatively result in several competing categories that are juxtaposed. This does not mean the GT was undertaken incorrectly, but that the inability to reach a core category may better reflect the nature of the area under research.

Enlarging the role of theoretical memoing in GT

This thesis argues that even as the research objectives, research area, or research problem are being discussed an initial and important part of the GT

approach is making theoretical memos. This is not to be confused with theoretical coding. The view that theoretical coding should begin at the same as the research begins enlarges the typical account of the role of theoretical memos. Memos usually provide a systematic record of, and aid to, the movement from data to conceptualising categories, and are normally placed within the constant comparison analysis process. Alternatively, theoretical memoing can be seen as the recording of any aspect of the study that significantly affects the generation of the theory, from the coding of a category to the reconsideration of the research area, to disagreements between researchers[48], or the specific conceptualising of a theory. Memos can be written about anything that the researcher believes is important in the development of the theory. The need for memoing continues throughout the data collection and analysis in order to record the process and nature of the theory's generation. The detail and form of a memo are whatever are most useful to the researcher, but it should be able to be related back to the date and data from which it arose.

Strauss & Corbin (1990, pp. 197-223) provide for a range of non-theoretical memos as well as theoretical memos, including: code notes (i.e., notes on open, axial, and selective coding); theoretical notes (i.e., notes that contain all information about the categories and categorizing, including theoretically sensitising and summarising memos (Strauss & Corbin, 1990, p. 197); operational notes (i.e., notes on any operational aspect of the research but also any ideas that may relate to the research); diagrams of relationships between concepts; and, logic diagrams of relationships between categories. This range of memos and diagrams would seem to cover any note or memo contingency. However, the researcher needs to prioritise memoing, and it is argued in this

[48] Glaser (1998) believes that grounding theory is a solitary process, and the involvement of more than one researcher will lead to arguments. This thesis argues that the use of multiple researchers in a GT study may lead to arguments, but on balance, it will also significantly improve the quality of the research. I have been unable to find an expression of opinion by Strauss and Corbin on the use of multiple researchers in GT. The number of authors that are typically involved in any given published GT study suggests that the 'team' approach to GT analysis may be common.

thesis argues that the priority is best placed on theoretical memos as soon as the research process begins. If the theory is to be validated at the end of data analysis, the path to its construction needs to be clear, not distributed across several memo/note/diagram options. The other memo options are still useful but do not have the same priority as theoretical memos[49].

GT researchers typically see the role of theoretical memos as specific and discrete. For example, Charmaz (2000) sees theoretical memoing as, "the intermediate step between coding and the first draft of the completed analysis...to spark our thinking and encourage us to look at our data and codes in new ways" (p. 517). This thesis argues that theoretical memoing is better employed to record the whole process of theory generation and that it therefore, cannot be restricted to one part of the research process, such as coding or categorizing.

Negative case analysis and theoretical sampling

Another key part of the constant comparison and coding process is negative case analysis. As comparing and coding continues, and as categories form and are revised through further analysis and data collection, researchers are directed to look for negative cases that are at odds with the categories, or for the links that have been made between categories (e.g., a form of verbal comforting that has typically been effective, but in a specific situation has been found to be strikingly ineffective). Negative case analysis helps account for the data, but of equal importance it prompts the revision of existing categories by making the researcher reconsider why the categories were formed.

In a similar sense, theoretical sampling aims to instigate a process that results in checking and reconsidering categories through further selective data collection. Theoretical sampling usually aims to test the emerging theory, and tends to be employed when the coding and categorising are fairly advanced, although further

[49] Memoing of all kinds has an important role in the potential replication of the GT.

sampling can be used wherever there is a need[50]. For example, the need for sampling can arise early in GT if the researchers find themselves needing to expand their research area (e.g., the study of comforting of patients in acute pain may need to incorporate post-operative patients as well as patients from emergency rooms).

Category saturation

When the data are fully accounted for, and no new codes are required or new categories can be found, and all new data can be coded into existing categories, then the categories are said to be 'saturated' and the data analysis and collection can conclude (e.g., all forms of comforting are accounted for). However, theoretical saturation is normally a goal to strive for rather than something that can be practically attained in GT. Typically, most of the data are coded and categorised, but not all. Some data will not be relevant to the research study. In any case, Glaser and Strauss (1967) and Charmaz (2000) believe the resulting grounded theory is only provisional and subject to further scrutiny and development. The saturated and linked categories are the basis for the grounded theory that emerges. The core category that underpins the other categories serves as the main basis for the grounded theory. The final grounding of the theory occurs when the theory is checked "by laying out the theory in memos diagrammatically or narratively" (Strauss & Corbin, 1990, p. 133).

5.3.5 Does GT explain or just describe data?

An issue in GT methodology that requires examination is whether the resulting GT explains the data it is grounded in, or merely describes them. In the original formulation, Glaser and Strauss (1967) argue for an inductive approach to the

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[50] There are four forms of sampling in GT. The first three types relate to a type of coding. 'Open sampling' operates during open coding, 'relational and variational sampling' relates to axial coding and 'discriminate sampling' is tied to selective coding (see Strauss & Corbin, 1990, pp. 175-193). Theoretical sampling then follows, and can be defined as, "sampling on the basis of concepts that have proven theoretical relevance to the evolving theory" (Strauss & Corbin, 1990, p. 176).

'discovery' of theory. In this approach the researcher cannot be a tabula rasa otherwise the researcher could not offer a perspective on the data (Glaser & Strauss, 1967, p. 3)[51]. Glaser (1992) then argues for an inductive approach solely aimed at discovering, but never testing, hypotheses. Strauss and Corbin's (1998) position evolves to where they believe it is more productive to use inductive and deductive approaches to verify as well as discover hypotheses. However, the exact nature of the inductive inferences (or discoveries) and the deductive inferences, are not clarified in either the Glaserian or the Straussian versions (Haig, 1996). This leaves a substantial question mark over precisely how the grounded theory emerges (Dey, 1999, p. 104).

Typically, constant comparison analysis is offered as the process by which inductive and deductive inferences lead to the discovery of theory. However, in the ambiguous, dense, and abstract world of GT concepts, reference to the constant comparison procedures does not really clarify the mechanism of theory generation. There is no inferential mechanism explicitly highlighted in Glaser's writing on induction and theory generation. Glaser (2002a) argues that conceptualising is the key process in the movement from data to patterns to categories and the emerging theory. However, what Glaser means by "conceptualising", and how it is to be used, is not clear. Unless the movement from data to theory involves something other than induction, Glaser would appear to offering only an account of descriptive inference about the data (B. D. Haig, personal communication, July 15, 2003). Similarly, Strauss and Corbin have not clarified the inferential mechanism of theory generation, although unlike Glaser they promote the selective use of deduction as well as induction. Therefore, the Straussian version can offer a theory that verifies as well as describes the data, but their grounded theory does not explain the data.

[51] Glaser and Strauss (1967) go as far as to suggest that the researcher uses his or her own "lived" and "personal" experience to gain a perspective on the data (p. 67, p. 252).

One solution to the 'problem of the missing inferential mechanism' in the generation of GT is to employ an abductive approach to inquiry (Haig, 1996), which can productively encompass both inductive and deductive inferences, and provide the explanatory inference for moving from data patterns or phenomena to theory. Haig argues for this approach using his abductive account of scientific method (Haig, 1996, 2002b). From Haig's (1996) application of the abductive method to GT, data are transformed into phenomena through inductive generalisations, but the explanatory move from phenomena to underlying causal mechanisms is characterised as abductive. From the underlying causal mechanisms a model or theory can be built. This abductive process better characterises the grounded theorist's 'discovery' of key categories or the core category that underpins the formulation of the grounded theory than does inductive method.

5.3.6 Confusion over GT terminology and procedures

The data analysis and data collection processes in GT are not well understood (Alvesson & Sköldberg, 2000; Charmaz, 2000; Dey, 1999). There are a number of reasons for this. The original GT text "The Discovery of Grounded Theory" (Glaser & Strauss, 1967) contained many ambiguities (Dey, 1999, p. 44), and clarification from Strauss and Glaser was slow to appear (Stern, 1994). The later works on GT by Glaser and Strauss and Corbin did not fully clarify the data analysis procedures and this further complicates the understanding of some procedures. The terms 'category/categorising', 'codes/coding', 'concepts/conceptualising', 'incidents', 'data', 'phenomena', and 'patterns' tend to be conflated, and are not always used in the same ways in the Glaserian and Straussian versions, or by others who write about GT. At no point are the fundamental concepts of 'data' and/or 'incidents' defined in the earlier or later works of Glaser or Strauss and Corbin (Alvesson & Sköldberg, 2000, p. 20). What is more, the originators of GT tend to use interchangeable terms such as the 'coding paradigm' and the 'paradigm model', which refer to the same analysis procedure, but do not clarify whether these terms refer to the same procedure

(see Glaser & Strauss, 1967). Glaser's dense, abstract, and at times bewildering writing style does not help matters (Bryant, 2003; Charmaz, 2000. p. 512). Strauss and Corbin have also become somewhat eclectic in their metatheoretical position. They appear to incorporate elements of naïve realism, constructionism, and relativism in their explanations of GT (Charmaz, 2000).

Perhaps in an attempt to remedy this problem, Strauss (1987), and Strauss and Corbin (1990, 1998), have become more prescriptive about how coding is to be undertaken, although they offer caveats to employ their prescriptions flexibly. New procedures such as dimensionalizing, using a coding paradigm, and the conditional matrix[52] have been introduced to aid or sensitise the researcher in the analysis process and to the emerging theory. These new analysis prescriptions have served to further separate the Glaserian and Straussian versions of GT. Dey (1999, p. 44) raises the issue of whether anyone can confidently use GT given the confusion over the data analysis procedures. Certainly, this confusion explains much of the diversity in the application of GT. However, methods are rarely static, and are developed and refined as a matter of course. In their analysis of the efficacy of GT, Alvesson and Sköldberg (2000) conclude that the many criticisms that have been raised about GT suggest that

> The further development and reformulation of grounded theory seems called for, building on a looser coupling to data and a more reflective focus upon the empirical material, combined with a bolder approach to the research process both in its foundations and theoretically. (p. 34)

Alvesson and Sköldberg cite Haig's (1996) initial reconstruction of GT as an example of what users of GT need to consider developing a more scientific framework for GT. Rennie (1998, 2000) also offers a carefully articulated approach to GT that, although based on a different research tradition and

[52] A 'conditional matrix' aims to theoretically sensitise the researcher to potentially influential constructs such as ethnicity, power, gender, and socioeconomic status in the analysis process.

metatheory than Haig's, provides another constructive attempt to resolve GT's outstanding issues. This is not to say GT does not currently offer a valuable approach, but, as Strauss and Corbin (1994) suggest,

> No doubt we will always prefer the later versions of grounded theory that are closest to or elaborate our own, but a child once launched is very much subject to a combination of its origins and the evolving contingencies of life. Can it be otherwise with a methodology? (p. 283)

5.4 The ability of GT to meet the criteria of reliability and validity

In the qualitative literature, the criteria of validity and reliability are not strongly associated with GT. This is due to two factors: the ambiguous relationship between Straussian GT and any system of evaluative criteria and the low profile and specialist nature of the criteria proposed in Glaserian GT. Originally, Glaser and Strauss (1967) suggested GT should meet three criteria, 'fit', 'relevance', and 'work'. The traditional criteria of evaluation were not considered the most appropriate for GT because of the flexible nature of qualitative research (Glaser & Strauss, 1967, p. 224). Glaser (1978, 1992) later added 'modifiability' and the criterion of fit came to include the idea of 'grab' (now known as the criterion 'fit and grab'). Strauss and Corbin (1990, 1998), and Corbin and Strauss (1990), make no further mention of the original or expanded criteria for GT proposed by Glaser and Strauss (1967), and further developed by Glaser. Nor do Strauss and Corbin specifically relate GT to the traditional criteria, or any form of the 'trustworthiness' criteria (Lincoln & Guba, 1985), but they note that all such criteria are important. Instead they prefer to supplement the traditional and alternative criteria with two sets of additional criteria, specifically aimed at first, the adequacy of the research process, and second, the empirical grounding of studies (see Corbin & Strauss, 1990, pp. 16-20; Strauss & Corbin, 1990, pp. 252-257; 1998, pp. 268-274).

Whilst Strauss and Corbin (1990, 1998) note reliability and validity are important goals of GT (e.g., 1998, p. 265), they are wary of "the more positivistic interpretations" (p. 266) of the traditional evaluative criteria and believe the traditional criteria have value but "require redefinition to fit the realities of qualitative research and the complexities of the social phenomena that we seek to understand" (p. 266). Unfortunately the nature of these redefinitions is not specified. Strauss and Corbin (1998) suggest that each method or "mode of discovery" should generate its own "standards and procedures of achieving them" (p. 266). In this sense, the use of GT dictates the use of evaluative criteria specific to GT, but Strauss and Corbin do not mean to exclude any traditional or alternative criteria. The grounded theorist can, therefore, employ Glaser's criteria, any of the alternative criteria with Strauss and Corbin's (1990, 1998) specific GT supplements, or the traditional evaluative criteria with the same supplements. With their typically ambiguous emphasis on procedural flexibility, Corbin and Strauss (1990) initially argue for the flexible use of evaluative criteria, noting that any evaluative criteria are no more than "guidelines" that should not be "hard and fast evaluative rules" (p. 20). However, they then place a much greater emphasis on researchers adhering to the "major criteria" of GT "unless there are exceptional reasons for not doing so" (p. 20). It is assumed that the major GT criteria referred to are the validity criteria (e.g., reliability) or any of the better-known alternative evaluative criteria (e.g., credibility), to which can be added the supplemental criteria proposed by Strauss and Corbin.

This thesis suggests that GT can meet the criteria of validity without redefinition. It is important to note that validity and reliability are stronger concepts than the alternative criteria developed to redefine or replace them. For example, Glaser's criterion of 'fit and grab' is very similar to the concept of 'credibility', to which the corresponding traditional criterion is 'internal validity'. Fit can be described as how well the data fits the theory, and if the theory accurately represents the data (Glaser & Strauss, 1967, p. 3). Grab relates to how relevant the theory is to the

people or substantive area under study[53] (Chenitz & Swanson, 1986). To fulfil the 'grab' aspect of the criterion, the study's participants and other researchers should recognise the grounded theory that has emerged as fitting their own understanding of the area (Rennie et al., 1988). Glaser believes that the rigour of the GT process ensures that the criterion of fit and grab will be automatically met (1978, 1992). It is not clear which GT procedures contribute directly to meeting the fit and grab criterion or whether it is the interaction of all of the GT procedures that satisfies the criterion. However, no data collection and analysis procedure can guarantee anything, although the use of rigorous procedures can of course promote the quality of findings.

Fit and grab is analogous to Guba and Lincoln's notion of credibility (1982, 1989; Lincoln & Guba, 1985). The above description of fit and grab could be a description of credibility, as it is usually understood. Credibility is intended to represent the 'truth value' of qualitative research (Guba & Lincoln, 1982), and procedures are employed to ensure the 'truth value' is satisfied. The key procedure is 'member checks', where the data and their interpretations are checked with the research participants, or a selection of research participants, to ensure those who supplied the data believe that the research findings accurately reflect their input. Guba and Lincoln (1982) describe member checks as the "backbone of satisfying the truth value criterion" (p. 110). However, it is doubtful that member checks can be the key validating procedure for qualitative research. Democratic consensus can hardly be a guarantee of 'truth value'. Neither can it offer a solid foundation for the accuracy of the data or its interpretation. Member checks can be a useful procedure whereby researchers can reassess their interpretation, particularly in ethnography where an emic stance is common, but basing the research's internal validity on the opinion of the participants is a dubious procedure. As Phillips (2000) puts it,

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[53] Grab overlaps considerably with Glaser's criterion of 'relevance'.

> Guba and Lincoln are paying the price, here, of misidentifying truth with credibility. Credibility is a scandalously weak and inappropriate surrogate for truth or veracity – under appropriate circumstances any nonsense at all can be judged as "credible". (pp. 181-182)

In an earlier paper, Guba (1981) applies member checks in two ways, both as an evaluative procedure and as a procedure to be regularly used during the research (see, pp. 85-86). While this broader use of member checks makes the procedure more useful, it does not overcome Phillips' criticism.

The traditional criterion that is most similar to fit and grab and credibility is internal validity, which is normally understood as a criterion that indirectly approximates 'truth'. To strive for internal validity in research is to strive for research findings that 'truthfully' represent the reality under study. In scientific realism, reality cannot be accurately represented, but can be approximated. 'Truth' cannot be guaranteed through research procedures, but serves as a regulative ideal that it is important to strive for (Phillips, 2000, p. 184). GT is improved if undertaken with the goal of achieving internal validity, because this criterion better represents the goal of truth than fit and grab or credibility. GT can maximise its ability to meet the criterion of internal validity, as well as the criteria of external validity and internal and external reliability, by the systematic application of multiple rigour-enhancing procedures (Morse et al., 2002). The specific procedures to help GT meet the criteria of validity and reliability are set out below. It should be noted that validity and reliability are closely related concerns and the procedures to be presented often apply to both criteria.

The procedures that are suggested in this thesis to meet the traditional criteria of validity in a GT approach are: constant case comparison (with a specific emphasis on justifying the categorisation of codes); memoing (in particular, memos that signal the origin of ideas for theory); negative case analysis (an essential procedure and one that can be productively applied in any qualitative research); respondent validation, or member checks (as part of the research

process but not as an evaluative procedure); peer analysis (this procedure is best understood as discussing one's interpretative 'logic' with other grounded theorists during the GT process); using full transcriptions[54]; theoretical sampling, and/or sampling adequacy (which is Morse et al's., 2002, somewhat broader definition of rigorous theoretical sampling procedures for qualitative research, and is vital to meet the criterion of external validity); rigorous fieldnote conventions (sometimes overlooked in GT, or perhaps overshadowed by other procedures, but essential as the Chicago School and Blumer (1969) convincingly demonstrated); category saturation (with the acceptance that some of the data generated will always be irrelevant to the research area); and, comprehensive documentation (a key procedure if other researchers wish to replicate a study).

This might seem to be a superfluity of procedures but each is genuinely useful. If GT is to be undertaken in its 'full' form, then these procedures will be part of a proper research commitment. Additional procedures can be applied, and may be essential, to promote reliability. For example, the use of inter-coder reliability checks could be profitably applied to GT. The usual and well-documented rigour-enhancing procedures in GT include constant case comparison, memoing, theoretical sampling, negative case analysis, and category saturation. The additions to this set of procedures made above may not be crucial to ensuring GT is valid and reliable, but promote a higher standard of rigour in GT. GT does not guarantee reliability and validity, because no method can, but does provide a system that rigorously and transparently strives for reliability and validity through multiple rigour-enhancing procedures.

5.5 Verbal protocol analysis

Verbal protocol analysis (VPA), also known as 'protocol analysis', or 'think-aloud research', is the second qualitative method to be examined in order to determine whether it can meet the validity criteria and bridge the qualitative-quantitative

[54] Glaser (1998) does not believe that transcription is important, but this thesis considers it vital to be able to demonstrate where in the data the important insights were gleaned.

divide. The nature of VPA is briefly characterised in order to provide sufficient background for the consideration of its ability to provide a warrant for scientific knowledge claims. VPA is a very different method from GT, but, as will be shown, it also provides a good example of a rigorous and systematic qualitative method that does useful work in psychological research.

5.5.1 The nature of VPA

VPA can be characterised as an experimental and qualitative approach to eliciting and analysing verbal data as a way of understanding how people think (Ericsson, 2001). VPA is a complex, highly prescriptive approach to generating and analysing verbal data (Ericsson & Simon, 1980, 1984/1993). It is also underpinned by an explicit and validated information processing theory of the verbalization of thought (Newell & Simon, 1972; Simon, 1979; Ericsson & Simon, 1980, 1984/1993). The combination of the VPA method, in conjunction with its accompanying theory of information processing and verbalization, provides researchers with a scientific framework to reliably understand the cognitive processes that underlie verbalizations. As will be seen, however, VPA is a method that assists in the detection of phenomena.

The nature of VPA is a response by its originators, Newell, Ericsson, and Simon, to the need to develop a method that uses verbal data in a scientifically reputable way. Ericsson and Simon's (1984/1993) texts on VPA are in large part comprehensive and scholarly justifications for the scientific worth of VPA. Ericsson and Simon (1984/1993) maintain that their use of verbal data upholds scientific values. They assert, "Whether one can and should trust subjects' verbal reports is not a matter of faith but an empirical issue on a par with the issue of validating other types of behavior like eye fixations or motor behavior" (p. 9). Ericsson and Simon (1993) understand verbal behavior as recordable behaviour that can be researched like any other behaviour. They maintain

> The cognitive processes that generate verbalizations are a subset of the cognitive processes that generate any kind of recordable response or behaviour. Hence, we would look for the same kind of "mechanical" and complete process description of verbal behaviour as of other kinds of behaviour, and we would not accept magical or privileged processes as explanations for verbalizations. (p. 9)

The metatheoretical stance of VPA

Although Ericsson and Simon do not specifically state a metatheoretical position in relation to VPA, it is possible to characterise their position as realist. Ericsson and Simon (1993) strongly support the empirical gathering of observable data, from which unobservable, underlying mechanisms can be inferred. They are deeply concerned with meeting the validity criteria for knowledge claims and devote much of the first and revised editions of their text to this goal (see "Protocol Analysis", 1984; 1993).

Simon's writings on the nature of scientific endeavour also provide a clear account of his conception of scientific discovery. The realist appearance of Ericsson and Simon's (1984/1993) work is consistent with Simon's (1991) broader writing. In fact, there is little, if anything, in Simon's (1991) writing that is at odds with a scientific realist position that permits the employment of qualitative research methods. In Simon's (1991) autobiography, he explains how he understands scientists as problem solvers ('Afterword', pp. 368-387). Simon suggests that in science, problems must first be properly and fully formulated then solved. The processes Simon (1991) uses in scientific problem solving are noticeably eclectic and creative. He has no particular preference for the use of qualitative or quantitative approaches to research, assuming either or both of these approaches can produce data that adhere to the traditional criteria for justifying knowledge claims (p. 371). Many of his examples of how the 'discovery' of solutions occur are abductive in character, for example, how physicians make diagnoses (see p. 368). He also clearly supports the use of abduction when looking to construct explanatory models (p. 378), and

hypothetico-deduction in the testing of hypotheses within a broad explanatory theory (p. 380). However, Simon (1991) expresses considerable concern about the role of statistical significance tests in theory testing: "When we test these stronger quantitative models, we must remember to throw away the whole standard apparatus of statistical significance tests which is no longer applicable" (p. 380). Typically, Simon uses an experimental approach in his research, but this approach can produce qualitative data, quantitative data, or both. He notes that he has frequently ignored experimental controls, and, more latterly in his career, the use of independent variables, in the pursuit of solving problems. Overall, he characterises his approach to science as discovery-oriented. Discoveries are achieved through seeking solutions to problems. Simon explains that problem solving is a "heuristic search through a maze" (p. 386), and this search is "the only fit activity for a creature of bounded rationality" (p. 386).

The origins of VPA in psychology

In psychology, the use of verbal data to understand cognition dates back to the methods used by the 19th century Introspectionists. In the early twentieth century, the perceived scientific worth of verbal reports began to erode. Ericsson and Crutcher (1991) cite the lack of objective methods used to elicit verbal reports as a key factor in their decline. The researchers who used verbal reports compounded this situation by being unable to come to agreement on a preferred method to study verbal reports (Ericsson & Crutcher, 1991). Therefore, verbal reports were discredited as scientific evidence for understanding psychological phenomena. It was not until the rise of cognitive psychology that verbal reporting re-emerged as an avenue for studying cognitive processes (Ericsson, 2002a). Through the work of Newell and Simon (1972), Simon (1979), and Ericsson & Simon (1980, 1984/1993), a new approach to using verbal reporting was developed to study cognition. This new approach, VPA, not only offered a methodological format broadly acceptable to cognitive psychologists, but it was also underpinned by a valid theory of information processing and a valid model of verbalization. The theory of information processing, the model of verbalization,

and the method of protocol analysis method combine to support the claim that verbal data can be collected and analysed scientifically. In psychology, the development of VPA confronted a long history of disregarding any 'introspective' verbal data as unscientific (Ericsson & Crutcher, 1991). The innovation of VPA re-energised the debate over the validity of methods that seek to use verbal data. Since Newell and Simon (1972), the debate about the validity of using verbal data and reactions for and against VPA has generated a considerable literature (e.g., Crutcher, 1994; Ericsson & Simon, 1984/1993; Nisbett & Wilson, 1977; Russo, Johnson & Stephens, 1989; Smagorinsky, 1998; Wilson, 1994). Ericsson and Crutcher (1991) note that although the use of verbal reports has encountered almost continuous theoretical and methodological controversy, critics of verbal reporting have never questioned the participants' ability to correctly recall and verbalise thought sequences. For example, J. B. Watson (1913), a major critic of the Introspectionists, pioneered the use of the 'think aloud' prompt to elicit data, a feature that is ubiquitous in VPA approaches (Ericsson, 2002a, p. 1). It is when researchers go beyond the verbal data and infer underlying cognitive mechanisms for verbalizations that controversies emerge (Ericsson & Crutcher, 1991). Despite the controversy, VPA it is now firmly established as a scientific method in cognitive psychology.

The current use of VPA in psychology

VPA is one of the key methods for studying thinking in cognitive psychology (Crutcher, 1994; Payne, 1994), where it has become closely associated with how people think when they solve problems (O'Hara & Payne, 1998; VanLehn, 1991). Within psychology, VPA has also been applied to: experts' thinking processes (e.g., Ericsson & Smith, 1991; Sonnentag, 1998), how people learn (e.g., Chi, Bassok, Lewis, Reimann & Glaser, 1989), exploring the structure of memory (Bellezza, 1986), as a complementary process for validating psychometric instruments (Green, 1995), and in behaviour analysis (Austin & Delaney, 1998). More broadly, VPA is used in a wide range of areas in a variety of ways (Wilson, 1994), including, many areas of cognitive science (Simon & Kaplan, 1989), for

instance, human-computer interaction (e.g., Sonnentag, 1998), consumer judgments and decision-making (see Kuusela & Paul, 2000, p. 388)[55], and medical research (e.g., Wilkinson & Murray, 2001). Crutcher (1994) notes that one of the key developments in the use of VPA is its application to help test psychological models, rather than just being employed to generate hypotheses for testing. The expansion of the uses and areas of use of VPA reflects a greater acceptance that verbal data is as scientific as third person observable behavioural data.

VPA continues to develop both in its breadth of use and through improvements to its procedures. For example, VPA is well known for being extremely time-consuming, particularly in its encoding process. Improvements to the encoding process, for instance the use of broader and more abstract codes when categorising verbal data, can considerably speed up a VPA study (Crutcher & Ericsson, 1992). This example is part of the active and diverse VPA literature that continues to debate and refine the method. Most recently, Yang (2003) has challenged Ericsson and Simon's support for localised context-free encoding and argues for a more context sensitive approach (p. 105). Taking a greater account of the context potentially provides a better understanding of some data, but may also increase the possibility of subjectivity when encoding. Ericsson and Simon (1993) clearly understand the dilemma of how much or how little of the context encoders should be exposed to. They conclude research is better served if the encoders are context-free because they are more likely to be objective.

Is VPA really a qualitative method?

There are no published references by qualitative researchers that identify VPA as a qualitative method. However, VPA is typically understood to be qualitative in nature by quantitative researchers, in the sense that statistical procedures cannot be directly applied until its data are encoded (Green, 1995). Once the VPA data

[55] Yang (2003, p. 96) offers a detailed list of published work in different research areas employing VPA.

are encoded, and VPA findings become quantifiable, then statistical procedures can be applied. However, within cognitive psychology, VPA is often referred to both as a qualitative and as a quantitative method in (e.g., Green, 1998). The fact that such a method has been actively used in psychology for over twenty years raises a number of questions. If the quantitative imperative is pervasive in psychology, how has VPA managed to prosper? If cognitive psychology can prosper using an approach based on the elicitation of verbal information, does that therefore mean that other qualitative methods can enjoy the same legitimacy? What is it that VPA does to meet the criteria of validity, and can those procedures be replicated by other qualitative methods? The answers to these questions are discussed in the following two sections. However, to anticipate briefly, VPA is generally understood to be scientifically legitimate because it employs rigorous and highly specific experimental procedures that fully account for the criteria of validity. The use of statistical procedures and strict procedures to control its participants has also helped legitimise VPA in a quantitative culture. Additionally, both a valid information processing theory and a valid model of verbalisation underpin VPA. VPA procedures do not readily lend themselves to typical qualitative approaches unless qualitative researchers adopt a laboratory setting. From this a general question arises: is VPA really a qualitative method? In short, the answer is that VPA is a successful combination of qualitative and experimental processes, which can also make use of quantitative methods. VPA's key virtue is its qualitative elicitation of verbal information, but this would be of limited value without VPA's extensive use of rigorous and systematic procedures. By employing these procedures, VPA shows that verbal reporting can be scientific. VPA also demonstrates the potential usefulness of combining qualitative and experimental research procedures, and both qualitative analysis and quantitative data analysis.

5.5.2 The VPA research process

There is considerable variation in how VPA procedures are used in research. In addition to the multitude of accepted procedural variations, there has been the

inevitable development of VPA beyond the methodological and theoretical boundaries set out by Ericsson and Simon (1980, 1984/1993). However, it is possible to clarify the general nature of VPA by describing its standard sequence of procedures. This characterisation is based on Ericsson & Simon (1984/1993), and Green (1998), unless otherwise indicated. The sequence of procedures in the VPA method is listed in figure 5.1, which has been adapted from Green (1998, p. 15).

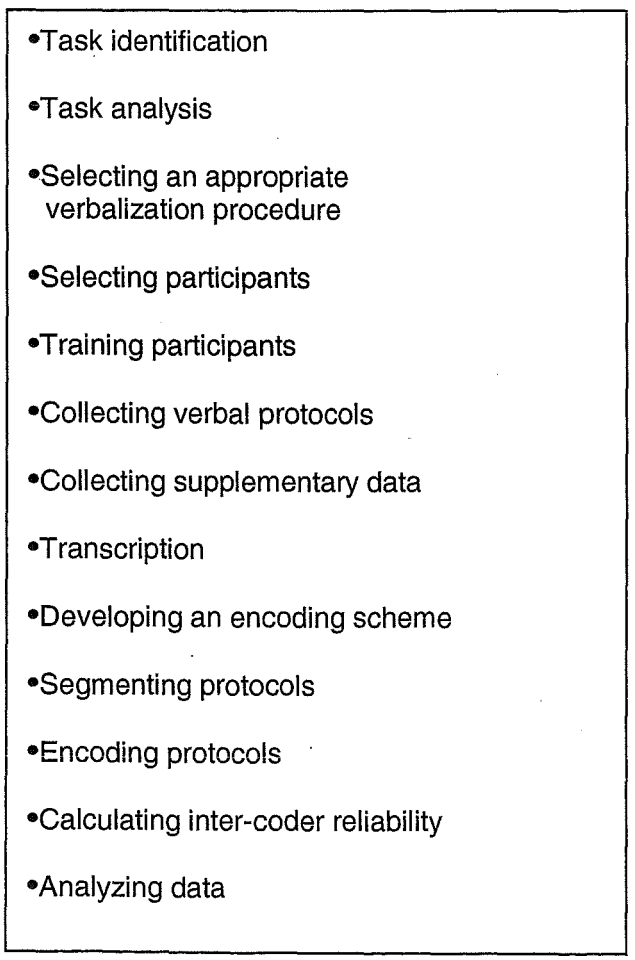

Figure 5.1 The sequence of procedures in the VPA method

The VPA research process begins with researchers identifying a task they believe is suitable for VPA. This task usually involves a relatively simple and discrete set of behaviours that potentially create a clear sequence of thoughts, for example, trying to solve a problem (e.g., a maths problem, for instance, 35 multiplied by 56). Tasks that are typically used in VPA include puzzles (e.g., Ericsson, 1975; Chi et al., 1989), reading or writing comprehension tasks (e.g., Trabasso & Suh, 1993; Kobrin & Young, 2003; van den Bergh & Rijlaarsdam, 2001), or some form of 'simple' behaviour such as card sorting (e.g., Zimmerman, Akerelrea, Buller, Hau & LeBlanc, 2003). Task identification, like all the procedures in VPA, contains a range of issues to consider and is not a matter of picking any relatively straightforward task. The researcher needs to consider, for example, the likelihood of the participants guessing the answer rather than working through the problem, past research successes and failures with the same or similar approaches, and the impact of the complexity or simplicity of the task. Task identification leads to task analysis. Task analysis involves the researcher specifying as succinctly, exactly, and comprehensively as possible the nature of the task that will be used, and all the alternative approaches participants could use to generate correct responses to the task (Ericsson, 2002a). Therefore, before the data collection begins, the researcher will have thoroughly considered how participants may approach the task.

A verbalization procedure is then selected. Most users of VPA strongly prefer employing a concurrent verbal protocol as their verbalising procedure (i.e., the participant speaks aloud, or 'thinks aloud', as he or she completes a task) because it is widely understood to provide insights into thinking processes that are more valid than alternative procedures (Kuusela & Paul, 2000). Verbal protocols can be generated in a variety of different ways, although the main two approaches are concurrent verbal protocols and retrospective verbal protocols. Whereas the concurrent verbal protocol approach involves the research participants expressing their thoughts as they undertake the specified task, retrospective verbal protocols are less common and involve the research

participants completing the set task and then detailing their thought processes. There are several kinds of concurrent and retrospective verbal protocol procedures, which are distinguishable by the level of involvement of the researcher in prompting the participants, or the number of participants who will work on a given task, and how those participants are directed to interact. Ericsson and Simon stress their preference for concurrent verbal protocols because the retrospective approach involves time delays and the recall of information, which may introduce redundant knowledge or result in the loss of information. Studies carried out specifically to compare the two approaches (e.g., Kuusela & Paul, 2000) normally find concurrent verbalization produces a higher quality verbal protocol than retrospective verbalization.

The next step is for participants to be selected and trained. Typically, the samples in VPA studies are relatively small because the nature of the method is very labour intensive, and although the sample sizes vary considerably, they rarely exceed one hundred participants[56]. Participants are selected because they are broadly representative of a larger target group (e.g., a sample of first year psychology students at a particular university that is representative of the larger population of first year psychology students attending the same university), or participants are selected because they have a particular trait or ability (e.g., some form of expertise). VPA samples are not usually randomly selected. For example, to understand how students deal with new technology, Yang (2003) collected six sets of data from six students studying classical Greece who were representative of a much larger group of students undertaking classical Greek studies. Alternatively, Vangelisti, Corbin, Lucchetti & Sprague (1999) employed a sample of 71 heterosexual romantic couples (aged 17-31) to study the couples' positive and negative thoughts about each other to gain insight into a particular

[56] A survey of the Psych-Info database searching under 'protocol analysis' revealed the size of samples used in VPA studies over the last five years varied from four participants (Austin & Mawhinney, 1999) to one hundred participants (Colman & Stirk, 1998). Ford, Schmitt, Schectman, Hults, and Doherty (1989), in a more rigorous survey of protocol analysis studies, found a range of sample sizes from 1 to 99 over 18 studies, with a mean average of 22 participants.

cognitive process but not to extrapolate to a broader population. Like grounded theory, the VPA sample is selected for its ability to provide useful data in a particular area. Often VPA studies do not even reveal how or from where the sample was selected (e.g., Bellezza, 1986). They may involve any manner of selection procedures like peer-nomination (Sonnentag, 1998), or responses to an advertisement (Chi et al., 1989). Given this ad hoc approach to sampling, VPA studies do not make probability-based claims about their external validity.

Once selected, the participants are then trained. The training process in VPA is highly specific. It is crucial to the validity of VPA that the participants learn not to interpret their explanation but simply think aloud as they undertake the task. Green (1998) notes, "Without this sort of training and familiarisation, data are likely to be heavily flawed" (p. 17). The verbal protocols of the participants' explanations of how, for example, they solve a problem, are audiotaped or videotaped. Often there is supplementary data collection, for instance, following the task the researcher interviews the participant to gain information on how the participant carried out the task, or to clarify any part of the verbal protocol that is unclear to the researcher. Seeking supplementary information needs to be undertaken with great care, because participant information from the participant's long-term memory would be invalid according to the information processing and verbalization model promoted by Ericsson and Simon (1984/1993) (Crutcher, 1994). The recorded verbal protocols are then fully transcribed to ensure that no information is omitted and that the protocol is unaltered by the process of transcription. In VPA, the transcription process is particularly detailed. It is normal for transcribers to place time markers (e.g., for every ten second period) in the transcription to indicate the length of pauses by participants or the time they take to complete each part of the task.

The verbal protocol then undergoes three rigorous procedures to prepare it for data analysis. First, an encoding scheme is developed for the coding of segments of the verbal protocol. Based on a random sample of the verbal data,

the encoding scheme is used to create coding categories that represent the commonalities in the verbal protocol for a given task. This enables the encoders to assign each verbalization to a category. When developing the encoding scheme, the researcher needs to be alert to the fact that participants often verbalise similar things in different ways. The second procedure is the segmentation of the data. Segmentation involves the division of the verbal protocol into verbal segments that correspond to segments of the task behaviour. These segments become the units of analysis and are phrases, sentences, or series of sentences. Third, the data are encoded. Two independent encoders encode the verbal protocols into the coding categories. Every segment of the verbal protocol must be assigned to a code. It is unlikely that the encoders will encode all the segments without encountering some ambiguous data. Ambiguous data that appear to qualify for more than one coding category are typically assigned their own code.

Before data analysis can begin, the inter-encoder reliability is calculated to ensure the data is reliable. The inter-encoder reliability is the extent to which two encoders assign the segments to the same coding categories. An inter-encoder agreement of 80% or more is necessary to claim the study's encoding process is sufficiently reliable (Green, 1995). The resulting encoded data can then be quantified for analysis with straightforward statistical procedures and tests of significance can be applied. For example, a chi-square test could be employed to study the relationship between two variables, or analysis of variance may be used to test the extent to which two groups are different in the frequency of particular verbal data. The most common data analysis techniques used in VPA are contrasting group designs (aiming to identify commonalities and differences within groups), profiling (i.e., profiles of the thought processes of individuals), and errors analysis (which focuses on the patterns of errors made rather that the strategies employed to find solutions). Lastly, Ericsson and Simon (1984) strongly emphasise that the analysis of the verbal protocol, particularly the

verification of hypotheses, is best undertaken within an explicit theoretical framework.

5.6 The validity and reliability of VPA

The published literature on the validity and reliability of VPA is considerable. To argue for the scientific nature of a method that focuses on verbal reports courts controversy. In particular, the literature has taken time to overcome the erroneous belief that VPA is a modern variant of the procedures of the Introspectionists (Crutcher, 1994). Since the development of VPA, there have been many attempts by its critics to demonstrate that it is not scientific. For example, Nisbett and Wilson's (1977), cite criticism of retrospective protocol studies and argue that participants are unlikely to be able to concurrently observe and report on their 'higher order' thought processes. However, Ericsson and Simon's (1984/1993) texts on VPA provide an exhaustive and scholarly of this and related criticism. Since the revised edition of Ericsson & Simon's text (Ericsson & Simon, 1993), criticism of VPA has been much reduced, although there are still regular attempts to challenge the validity of VPA. A recent example is Smagorinsky (1998), who directly questions much of the early evidence for VPA and Ericsson and Simon's (1980, 1984/1993) model of verbalization. In response, Ericsson and Simon (1998) point out that this evidence is indeed from early VPA studies and has since been superseded by later studies by Ericsson and Simon or incorporated into reviews in the preface of the second edition of their text.

5.6.1 The validity of VPA

The validity and reliability of VPA each have two aspects that need to be considered: first, the validity and reliability of the technique itself, and second, the validity and reliability of the encoding process. The debate over the scientific worth of VPA has largely centred on the validity of the VPA technique. This criticism can be organised according to three questions: 1) Do verbal reports accurately reflect the participants' thinking? 2) Does asking participants to report

on their own thinking affect the nature of their thinking (i.e., the problem of reactivity, see Russo et al., 1989)? 3) Is it possible to research verbal protocols as objectively as other behavioural data (Crutcher, 1994, p. 241)? These questions are now examined.

The validity of the VPA technique.

The validity of the VPA technique is based on the ability of the VPA procedure to elicit verbal information without being confounded by research participants' interpretation or disrupted by the researcher. VPA aims to capture fluent, accurate, and 'uncontaminated' verbal information from participants' short-term memory as they complete a given task. Therefore, whether the VPA technique is valid or not rests on the extent to which the instructions the participant heeds when undertaking the task corresponds to what the participant then verbalises. Ericsson (2002a) expresses the central assumption on the validity of VPA when he states, "It is possible to instruct subjects to verbalize their thoughts in a manner that doesn't alter the sequence of thoughts mediating the completion of a task, and can therefore be accepted as valid data on thinking" (p. 1). For example, in a typical VPA task, the participant is asked to verbalise his or her 'thinking' when completing a simple mathematical problem (e.g., 24 multiplied by 36). This allows the researcher to capture the verbal expression of the participant's problem-solving processes. For instance, "I'm multiplying 6 and 4 to get 24, then carrying the 2, a zero down and 2 times 3", etc. These data can be compared to verbal reports that are confounded by a range of possible 'contaminants', including participant interpretation, an incomplete expression of the problem-solving process, or some disruption by the researcher. For example, a poor verbal protocol would be, "I'm adding the two figures, but I've never been very good at maths, may I use a calculator? Gosh this is taking a while, do you think I should divide them? I remember this when I did maths as a child. Sorry, did you say something?" A valid VPA approach captures the verbal information it aims to capture with the minimum of involvement from the researcher and without the participants reflecting when they verbalise their thought processes.

Ericsson and Simon (1984) undertook an initial extensive review of the VPA literature to assess the validity of VPA, which they then updated in 1993, with the review of another thirty VPA studies. They found that when researchers used VPA in the correct manner (i.e., as set out in Ericsson & Simon, 1980, 1984) the verbal protocols generated were valid, although Ericsson and Simon were also willing to accept some criticisms showing limitations to the applications of VPA. Ericsson and Simon (1984/1993, 1998), and Ericsson (2002a & b) provide a range of arguments to support the validity of the VPA technique. Essentially these arguments set limits on the uses of VPA. For instance, a key limitation is that VPA aims to access short-term memories about the task the VPA study focuses on (Crutcher, 1994). When VPA studies go beyond the constraint of short-term memories, verbal protocols can often fail to match observable behaviour (Ericsson & Simon, 1993). In the same manner, Ericsson and Simon are less enthusiastic about VPA studies that use retrospective rather than concurrent verbal protocols, because the time delay between doing the task and speaking about the task may introduce confounding information. Ericsson and Simon have also been tireless reviewers of the exact procedures used in VPA studies, particularly research that produces results critical of the validity of VPA procedures. Typically, what Ericsson and Simon have found is that the procedures used in studies critical of VPA have been inconsistent with the specific procedures they support. This is not to say Ericsson and Simon (1984/1993) have resolved all criticisms of the VPA technique (cf., Russo et al., 1989), but they have certainly demonstrated that VPA is generally a highly valid technique when used appropriately.

Support for Ericsson and Simon's position for the validity of VPA can be found in number of different studies. A key research finding of these studies is that verbally expressing thoughts when completing a task, or staying silent when completing a task has no significant impact on the sequence or content of thoughts (Ericsson & Simon, 1993). That is, the nature of the thoughts and their

structure are not corrupted by verbalization. Support for the validity of VPA also comes from the use of what is called 'intermediate results' that support the internal consistency of the verbal protocol (Ericsson, 2002a). In VPA, verbal protocols need to correspond to intermediate results from different strategies specified in a task analysis. For example, the sequence in the verbal protocol elicited for the problem 42 x 56 needs to correspond to the sequence of intermediate verbalizations specified by one of the possible approaches for calculating the answer in the task analysis (Ericsson, 2002b). Ericsson and Simon (1993) accept that the correspondence between the verbal protocol and intermediate results are not usually perfect, but that they are normally very similar, and sufficient to strongly support the validity of VPA (see Ericsson, 2001). Verification of Ericsson and Simon's belief about the way participants complete tasks also comes from sequences of eye fixations, patterns of brain activation, and reaction time measures (Ericsson & Simon, 1993). Another potentially confounding influence of the VPA technique is the training of participants to think aloud. The training of participants to think aloud, or the instructions participants receive whilst they are completing the task, may introduce 'foreign' cognitive processes. Ericsson and Simon (1993) specifically examined this possibility and found that there were no systematic changes to participants' thought processes because of training or researcher instructions.

The validity of the VPA encoding process

The validity of VPA's encoding process is another concern. Ericsson and Simon (1984/1993) stress that the encoding process must be as objective as possible. They suggest, "Without appropriate safeguards, the encoder, exposed to a series of ambiguous verbal statements, may encode them with a bias toward his own preferred interpretation" (p. 287). To be valid, the encoder needs to strive to provide codes for the data that accurately reflect the cognitive processes and instructions given to the participant as the task is completed. The context of the verbal protocol provides the appropriate contextual cues for the encoder but may also provide misleading cues. Yang (2003) feels Ericsson and Simon advise

excessive control when faced with the dilemma between too little and too much context. Yang would prefer to allow the encoders to more fully understand the context within which they are working in order to improve the quality of the encoding. To assess the validity of the encoding process indirectly, Green (1998) suggests that the behaviour in the verbal data needs to be compared with some form of collaborating data. For example, "a record of key presses made while a computing task was carried out, or a videotape of eye fixations as a perceptual task was carried out" (Green, 1998, p. 12). Ericsson and Simon (1993) also warn against encoders knowing the hypotheses to be tested, or assuming participants share the encoders' view of the world. Ericsson and Simon suggest that the encoders are best kept unaware of hypotheses to be tested.

5.6.2 The reliability of VPA

As noted above, there are two elements to the reliability of VPA that need to be considered. First, the reliability of the VPA technique, and second, the reliability of the VPA data encoding.

The reliability of VPA as a technique

The reliability of the VPA technique centres on the likelihood of the same research participant producing similar verbal protocols in response to the same tasks on different occasions. Ericsson and Simon (1993) review the few studies on the reliability of verbal reports and the reliability of their own work using VPA (pp. 356-372). They note that if the same participants are given the same tasks several times, then the participants' verbal data can be compared. However, Ericsson and Simon (1993) suggest that, "It is hard to produce identity in cognitive processes on two successive occasions" (p. 357). The potential lack of reproducibility stems from the fact participants can learn or partially learn the skills they need to complete a given task, or they can simply remember the task and therefore confound the test. Overall, Ericsson and Simon found that the VPA technique demonstrated considerable reliability (pp. 371-372), although this

conclusion, as Ericsson and Simon recognise, is based on the very few available studies using individual protocols (i.e., the protocols of an individual on different occasions).

The reliability of the VPA encoding process

The reliability of the encoded data is based on the probability that two independent encoders using the same categories will encode the same data similarly, and achieve an inter-encoder agreement that is better than chance. Additionally, the inter-encoder agreement needs to show that differences between the encoders are not systematic (Ericsson & Simon, 1993, p. 293). Alternatively, the same encoder similarly coding the same set of data twice can establish the reliability of the encoded data. In a typical study, two encoders are used to encode all of the verbal protocol, although in many studies only a proportion of the data is encoded (Ericsson & Simon, p. 298). The level of agreement between the two independent encoders provides a measure of the reliability of encoding. If the level of agreement between the two encoders is high, then the encoding is understood to have good inter-encoder reliability. Researchers using VPA typically accept an inter-encoder reliability measure of at least 80% to demonstrate that the encoding process is reliable (Green, 1995). Ericsson and Simon (1993) highlight the fact that in the VPA literature there are notable similarities in coding categories between different researchers working on different studies but investigating the same task. In ensuring that the reliability of the encoded data is maximised, the researcher faces a range of potential problems. For example, both encoders need to have sufficient experience and ability at encoding. In addition, encoders should not be involved in segmenting the verbal protocols, because this may bias them to their own transcribing choices. Moreover, the transcriber needs to be very careful how she or he reproduces the verbal and non-verbal protocols (e.g., silences) for the encoders (Green, 1998, p. 13) because silences that are not transcribed convey a potentially misleading impression of how rapidly the task is completed.

5.7 Concluding comments on the validity and reliability of VPA

Whilst there have been ongoing criticisms of the validity and reliability of VPA, these criticisms have generally been satisfactorily addressed by Ericsson and Simon (1984/1993). Those criticisms that have not been directly rebutted have helped set boundaries for the use of VPA. When VPA adheres to the valid theory of information processing and model of verbalization, and the procedures set out by Ericsson and Simon (1984/1993), the acceptability of VPA's validity and reliability become difficult to challenge. It is fair to conclude that through employing rigorous experimental procedures, based on a clearly articulated information processing theory and verbalization model, VPA is a scientifically sound qualitative method.

5.8 The theory of explanatory coherence

The third qualitative method to be examined is Thagard's (1989a, 1992) theory of explanatory coherence (TEC). Like GT and VPA, TEC is considerably more than a qualitative method. TEC is another example of a fusion of ideas that challenges accepted methodological boundaries between qualitative and quantitative approaches to create an effective method for evaluating theories. Otherwise, TEC appears strikingly dissimilar to GT or VPA. TEC is a controversial, but influential, account of theory evaluation in science and in everyday life (Haig, 1996)[57]. TEC represents a significant improvement in the understanding of the notion of inference to the best explanation (Haig, 1996). Inference to the best explanation refers to the idea that a great deal of what is known about the world is based on judging the explanatory worth of competing theories. Assessing the explanatory worth of a theory usually involves a process of evaluating it against one or more competing explanatory theories. TEC argues that the inference to the best explanation is centred on explanatory coherence. For Thagard (1989a) explanatory coherence is the extent to which a theory's explanatory relations cohere or hold together. When a theory is understood to

[57] Two other major approaches to theory evaluation are hypothetico-deduction and Bayesian statistical inference.

provide a better explanation of the available evidence than alternative explanations, it is accepted as the best explanation (Thagard, 1989a).

TEC's constituent procedures for evaluating competing theories, which are both qualitative and computational, are highly relevant to this discussion. The practical application of TEC is based on Thagard's (1989a, 1992) connectionist computer programme ECHO[58]. Using ECHO[59], TEC aims to evaluate competing theories, in a manner that is supported by historical or contemporary case studies (e.g., Darwinism versus Creationism), to establish which theory has the greater explanatory coherence. TEC does not use data as they are usually characterised (i.e., some form of observable, behavioural data). The 'data' are evidence units and explanatory hypothesis units. ECHO computes the relative activation of evidence units, for which explanatory hypotheses units compete. The explanatory hypotheses units act for or against competing explanatory theories. The researchers undertake the formulation of the evidence units and explanatory hypothesis units based on the investigation of the relevant historical or contemporary facts. The formulation of units is therefore a qualitative process.

It is more challenging to apply validity and reliability considerations to TEC. Such considerations are more easily applicable in probabilistic rather than explanatory approaches to theory evaluation. However, it is still possible to apply validity and reliability to TEC and ECHO as a qualitative method. Equally important and more relevant for TEC is the coherentist justification of knowledge claims. A coherentist justification centres on the idea that a knowledge claim is justified by its coherence with other knowledge claims. While the analyses of grounded theory and VPA have focused on a reliabilist justification of their knowledge claims, a coherentist justification is of equal importance. Indeed, any adequate

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[58] ECHO stands for Explanatory Coherence by Harmany Optimization. The pun on 'harmony' is a salute by Thagard to Harman (1965) and his pioneering work on inference to the best explanation.

[59] Through revisions to the theory, the ECHO programme has evolved to ECHO.2, although it is still referred to as ECHO (Thagard, 1992).

conception of methodology should seek both a reliabilist and coherentist justification (Haig, 2002b). TEC and ECHO clearly offer a coherentist approach to validation. Before the qualitative mechanics of ECHO are examined, a fuller understanding of TEC is required. The three criteria TEC applies to evaluate the explanatory coherence of competing theories are introduced, followed by a characterisation of the seven principles that underpin the criteria. The clarification of the three criteria and seven principles are important in order to understand the design of ECHO. The reliability and validity of TEC and ECHO can then be considered.

5.8.1 TEC's three criteria of theory evaluation

TEC applies three criteria that operate together to establish which of two competing theories has the greater explanatory coherence. The criteria are explanatory breadth, simplicity, and analogy. The most important of the three criteria is explanatory breadth, which is also known as 'consilience'. Explanatory breadth refers to the range of facts a theory can explain. The more facts the theory can encompass the greater its breadth of explanation (Thagard, 1992). For example, Darwinism encompasses a greater number of facts, such as the geographical distribution of similar species and the existence of vestigal organs, than does Creationism. The criterion of simplicity requires that the theory's explanations are pithy, and that the theory does not indulge in ad hoc assumptions. For example, Darwinism provides a good example of a relatively simple set of cohypotheses that do not rely on additional assumptions. Darwinism can be constrasted with the need to generate further ad hoc explanations within Creationism, in order to explain the same set of facts. The third criterion, analogy, refers to the idea that a useful theory will be analogous to other accepted theories that explain similar data; i.e., the theory coheres with similar theories. For example, Darwin notes the analogous relationship between artifical selection and natural selection as support for his theory. In TEC, the criteria of explanatory breadth, simplicity, and analogy combine to assess the relative explanatory coherence of competing theories.

5.8.2 TEC's seven principles of explanatory coherence

The three criteria are underwritten by, and embedded in, seven principles (B. D. Haig, personal communication, September 22, 2003). The principle of 'data priority' is different from the other principles, because it does not directly relate to explanatory coherence. As a group, the principles set out the local relations of explanatory coherence between a theory or hypothesis and other propositions (Thagard, 1989a, p. 435). Thagard (1992) also suggests that these principles provide a basis for judging the explanatory worth of individual propositions that comprise an explanatory system, as well as the explanatory worth of the whole theory. Thagard (1992, pp. 64-69) characterises the seven principles are follows:

Principle 1: Symmetry

The coherence or incoherence of propositions is expected to be symmetrical. Propositions that incohere are assumed to resist each other. Therefore,

(a) If P and Q cohere, then Q and P cohere
(b) If P and Q incohere, then Q and P incohere

Principle 2: Explanation

This principle explains the coherence relations between propositions in the theory that underpin explanatory coherence, making it the most important principle for selecting the best explanation (Thagard, 1978). Of the seven principles, the principle of explanation works hardest to meet the criterion of explanatory breadth. The principle of explanation can be stated as follows: two hypotheses are assumed to cohere if they work together to explain something. The cohering hypotheses are called 'co-hypotheses'. The more hypotheses that are needed to explain something the lesser the extent of the coherence between the hypotheses and what is being explained. Thagard (1992) expresses this principle thus,

If $P_1 \ldots P_m$ explains Q, then:

(a) For each P_i in $P_1 \ldots P_m$, P_i and Q cohere.

(b) For each P_i and P_j in $P_1 \ldots P_m$, P_i and P_j cohere.

(c) In (a) and (b) the degree of coherence is inversely proportional to the number of propositions $P_1 \ldots P_m$.

Principle 3: Analogy

The principle of analogy is the same as the criterion of analogy. Analogous propositions or theories are taken to cohere if they explain analogous data. Therefore,

> If P_1 explains Q_1, P_2 explains Q_2, P_1 is analogous to P_2, and Q_1 is analogous to Q_2, then P_1 and P_2 cohere, and Q_1 and Q_2 cohere.

Principle 4: Data priority

In Thagard's words, this principle asserts propositions that describe the results of observation have a degree of acceptability on their own. However, Thagard (1992) notes the principle of data priority requires much "elucidation and defense" (p. 68). A degree of acceptability does not mean that the proposition is beyond doubt, but it does mean that a proposition that can describe observations as well as explain them is better than a proposition that can only explain the results. Data priority is unlike the other principles, as it does not relate to explanatory coherence.

Principle 5: Contradiction

Principle five can be straightforwardly described thus: if two propositions contradict one another then they incohere, that is, if P contradicts Q, then P and Q incohere.

Principle 6: Competition

The principle of competition is based on the assumption that propositions that endeavour to explain the same data are in competition, and if their explanations

are not connected then they are understood to incohere. However, if there is a reason to believe that the competing explanations are connected then they may cohere. Thagard explains principle six in these terms:

> If P and Q both explain a proposition P_i, and if P and Q are not explanatorily connected, then P and Q incohere. Here P and Q are explanatorily connected if any of the following conditions holds:
>
> (a) P is part of the explanation of Q,
>
> (b) Q is part of the explanation of P,
>
> (c) P and Q are together part of the explanation of some proposition P_j.

Principle 7: Acceptability

If theories have satisfied principles one to six, they therefore satisfy principle seven. Principle seven expresses the assumption that "we can make sense of the overall coherence of a proposition in an explanatory system just from the pairwise coherence relations established by principles 1-6" (Thagard, 1992, p. 69). Thagard formulates this first part of principle seven as:

> (a) The acceptability of a proposition P in a system S depends on its coherence with the proposition S.

The second part of principle seven relates to the situation where, if the available hypothesis explains a relatively small amount of the available data, then it is less acceptable. That is,

> (b) If many results of relevant experimental observations are unexplained, then the acceptability of a proposition P that explains only a few of them is reduced.

5.8.3 The ECHO computational programme

To apply the principles of TEC and allow the acceptability of competing theories to be obtained computationally, Thagard developed the connectionist computer programme ECHO (Thagard, 1989a), which has since been updated with the addition of the sixth principle, 'competition' (Thagard, 1992). Through ECHO,

Thagard uses a connectionist algorithm to apply the principles of TEC. In ECHO, 'units' represent propositions that in turn represent evidence or explanatory hypotheses. The links between units represent the relations of coherence or incoherence. These relations adhere to principle one in that they either cohere or incohere symmetrically. Principles two and three deal with coherence relations. Principles five and six deal with incoherence relations. 'Excitatory links' represent coherence relations and 'inhibitory links' represent incoherence relations. For example, an excitatory link will connect two units if the two propositions represented by the units cohere. Alternatively, an inhibitory link between units represents a contradictory or competitive relation between two propositions. Principle four is applied by connecting links between the units representing the propositions and a 'special evidence' unit that is given an activation of 1, which supplies each unit with some acceptability.

The conversion of the propositions into units with excitatory or inhibitory links creates a connectionist neural network. When the neural network is 'run', it is converted into a stable state as 'activation' spreads from the special evidence unit to all units. The theory or hypothesis that has the greatest activation, that is, the most excitatory links and the least inhibitory links, will be the 'winner'. Activation starts with the special evidence unit and moves to the other evidence units (i.e., E1, E2 etc.) and then the explanatory hypothesis units (i.e., H1, H2 etc.). The explanatory hypotheses compete for activation that stems from the evidence units. However, because there is an inhibitory link between the explanatory hypotheses, if one hypothesis gains the activation of an evidence unit, the other hypothesis will not receive this activation. As the explanatory hypotheses compete, ECHO employs a connectionist algorithm to compute the hypotheses' relative acceptability. The algorithm regularly adjusts the activation of all forms of units based on the units' excitatory and inhibitory links. This process of activation adjustment for each unit is continued until the network becomes stable, indicating that the units' activation has stabilised. The resulting activation levels of the units indicate the acceptability of the propositions they

represent. Those units with a positive activation (i.e., greater than 0) are accepted, and those units with negative activation (i.e., less than 0) are rejected. One of the two propositions emerges as active and the other is deactivated. The active proposition is considered to have the greater explanatory coherence because it can explain more facts than the alternative proposition, provide a simpler explanation, and is analogous to a similar theory that is accepted.

5.9 The validity and reliability of TEC and ECHO

It is possible to apply validity and reliability considerations to TEC and its qualitative and computational method ECHO. Whether TEC, through the application of ECHO, produces a reliable and valid outcome based on reliable and valid 'data inputs' has attracted a wide range of discussion (Thagard, 1989a, 1991, 1992). The objections to TEC and ECHO are too numerous and diverse to be individually considered, but some of them can be structured into three relevant areas for examination: the reliability and validity of ECHO; concerns about the general approach of TEC; and, TEC and probability theory.

5.9.1 The reliability and validity of ECHO

Thagard (1989a, pp. 453-456) notes a number of limitations to the ECHO programme. The greatest limitation is that the researcher constructs the evidence and explanatory hypothesis units (see Dietrich, 1989; Downes, 1991, 1993; McCauley, 1989; for criticism of this process). Although different researchers have used TEC in over a dozen cases, there has been no formal attempt to assess inter-encoder reliability in the construction of units (Thagard, 1989a). TEC assumes the validity and reliability of the evidence and hypothesis units. For example, when Thagard evaluates Lavoisier's oxygen theory against the alternative phlogiston theory, the first evidence unit is, "In combustion, heat and light are given off" (Thagard, 1989a, p. 444). For ECHO to be a reliable and valid method, all evidence units need to be assumed to be accurate and consistent. The same question can be raised in relation to whether explanatory hypothesis units accurately represent the positions of Lavoisier and the

phlogiston theorists. Several critics of TEC have focused on what they feel is an inadequate representation of the historical facts in applications of ECHO (e.g., Dietrich, 1989; Roberts & Gorman, 1991).

Similarly, McCauley (1989) argues that scientists are unlikely to agree about what constitutes an analogy (the third criterion), and McCauley's scepticism towards a likelihood of scientists agreeing is in fact extended by Thagard (1989b) to apply to any input into ECHO. However, Thagard does not feel the inevitable differences of opinion between scientists about, for example, what is the most appropriate evidence unit for phlogiston theory, should impede the implementation of ECHO. Thagard argues that the units as well as the links in ECHO are derived directly from "the level of the discourse at which scientists normally operate" (1989b, p. 498), and that he has not had to change them to fit ECHO. Moreover, Thagard (1989a) cites "scientific texts, newspaper reports of trials, and subject protocols" as sources for the units (p. 453). The specific origin of the units is not difficult to trace, although, TEC researchers may have also relied on their own scientific knowledge as well as specific texts. An inter-encoder reliability experiment to assess how different researchers formulate units for the same case study would help clarify the claims of reliability for ECHO. Thagard (1989a) proactively suggests the need for such an experiment (p. 453).

In a related concern, Thagard (1989a) does clarify the level of detail he feels is required in the units. The detail contained in units could be far too complex, or too simple to be useful in the neural network. Thagard suggests using approximately the same level of detail used by the main theorists of the competing theories. In fact, Thagard (1989a) offers a "Detail Maxim":

> In analyzing the propositions and explanatory relations relevant to evaluating competing theories, go into as much detail as is needed to distinguish the explanatory claims of the theories from each other, and be careful to analyze all theories at the same detail. (p. 454)

For Thagard, this maxim avoids the potential arbitrariness when trying to establish a consistent level of detail in units, and highlights the potential need to work between different theories to construct units. There would seem to be considerable scope for different interpretations of detail by different researchers. This potential variation in interpretation is not worrisome as long as TEC researchers make the nature and level of detail of the units available for scrutiny. Thagard makes all the important procedures in ECHO, including the resulting evidence and explanatory hypothesis units, explicit in his applications of TEC[60]. Other researchers should be able to follow the procedures and replicate Thagard's published case examples. No one other than Thagard and his co-researchers have published examples of TEC.

Other critics have proposed simplifications of ECHO. Hobbs (1989) suggests totalling the evidence units a theory explains and then subtracting the number of hypotheses it uses. The best theory will have the highest number and is free of contradictions. Chater (1991) proposes the even simpler approach of choosing the theory that explains the most evidence units. Both critics perceive the use of ECHO as cumbersome and unnecessary. Thagard (1989b, 1991) defends the use of ECHO as the practical application of TEC by demonstrating that the simpler methods do not provide the same degree of subtly and insight as ECHO. ECHO considers the worth of each unit, not just which theory is better (Thagard, 1991). Explaining the most evidence does not necessarily mean a theory is better than the alternatives (Thagard, 1989b). Moreover, unlike the proposed simpler versions, TEC also aims to generate insights into scientific thinking that features explanatory coherence, as well as to evaluate competing theories.

5.9.2 The general approach of TEC

The broad criticisms of TEC's general approach are not particularly forceful, but are highlighted to demonstrate important virtues of TEC. Various critics have argued that the general approach of TEC is logical positivist (Dietrich, 1989),

[60] This includes access to ECHO software; see http://cogsci.uwaterloo.ca/javaECHO/jecho.html.

logical empiricist (Downes, 1991), or sociological (Wetherick, 1989). TEC is neither logical (in the formal sense) nor positivistic. Unlike positivistic approaches, TEC focuses on "high level theories, not on observation, and data can be rejected" (Thagard, 1989b, p. 491). The claim that TEC is akin to logical empiricism is equally erroneous because TEC is centred on explanation and coherence and not on empirical adequacy (Thagard, 1991, p. 747). Wetherick's claim that TEC is sociological is difficult to substantiate given that TEC and ECHO are primarily informed by cognitive psychology, philosophy, and artificial intelligence. These three critics appear to struggle with the fact that TEC is a confluence of many different approaches that cannot be adequately captured by a single metatheory or discipline. TEC is meant to be a theory in the philosophy of science and a psychological theory, and aims to be both descriptive and prescriptive, or "biscriptive" (Thagard, 1989b, p. 491). TEC is also qualitative and computational. What TEC signals, amongst other positive contributions, is that the boundaries that separate methodologies, substantive disciplines (Chater, 1991), and metatheories can be profitably ignored.

5.9.3 TEC and probability theory

There have been many objections to TEC by supporters of probability theory because it ignores this form of reasoning (e.g., Cohen, 1989; Papineau, 1989; Reggia, 1989). These critics usually prefer a Bayesian approach to probability theory. Their objections take a variety of forms but centre on the fact that TEC does not explicitly allow for probability theory. In response, Thagard (1989a, 1989b, 1992, 2000, 2003) has made considerable efforts to compare and even integrate probabilistic approaches with TEC and its explanationist approach to causal reasoning. Thagard (2000) gives ECHO a probabilistic interpretation, although this proves computationally challenging. If appropriate probabilistic information is available, then ECHO can incorporate it. However, ECHO does not need probabilistic information to work, and such information is seldom available (Thagard, 2000, p. 113). Thagard (2003) compares four competing explanations of the jury's verdict in the O.J. Simpson trial, including explanations

based on explanatory coherence, probability theory (through the construction of Bayesian networks), wishful thinking, and emotional coherence. The outcome is that probability theory provides a considerably more complicated and artificial explanation using ECHO than the simple and natural explanation offered by the interaction between emotional bias and explanatory coherence. Thagard (1989b) maintains that researchers should "use statistical inference and probabilistic reasoning whenever possible" (p. 496), but that with the qualitative evaluation of theories this information is not often obtainable. As Thagard has regularly noted (1989a, 1991, 2000), there are limits to the scope of ECHO's application to reasoning. So far, TEC and ECHO have been developed to apply to only a small part of scientific thinking (Thagard, 1991, p. 747).

5.10 Concluding comments on the validity and reliability of TEC

Although TEC has faced considerable criticism about its scientific legitimacy, most of this criticism has not brought any needed change to TEC. Thagard has responded openly to the criticism and in part endeavoured to adapt TEC when there have been effective challenges. In particular, Thagard (2000) has tried to account for the probabilistic approach to causal reasoning using ECHO, although this has not required change to the central characteristics of TEC or ECHO. The only notable change has been a refinement to both TEC and ECHO between the original 1989 paper and its 1992 presentation in "Conceptual Revolutions" (Thagard, 1992) with the addition of a principle of competition. However, one concern remains, namely the reliability and validity of the construction of evidence and explanatory hypothesis units, which, as Thagard has noted, requires further examination. A procedure involving two researchers independently constructing units may be a useful addition for the ECHO method, and would help to promote its reliability and validity.

More importantly, Thagard (1989a, 1992, 1999, 2000, 2003) has provided a range of examples to support the viability of TEC and the application of ECHO to compute explanatory coherence and evaluate competing theories. Theories that

have been successfully evaluated using ECHO include Darwinism versus creationism, the oxygen theory of combustion versus the phlogiston theory, and alternative theories as to why the dinosaurs became extinct. TEC has also been applied beyond scientific contexts to problem solving in legal cases. Most recently, Thagard (2003) has applied TEC to the trial of O.J. Simpson to ascertain why the jury reached the verdict it did. The repeated success of these applications suggests that ECHO offers a viable qualitative approach to scientific theory evaluation that can be readily applied by scientists to many different situations where explanatory inferences are used.

5.11 Conclusions

Chapter five had two goals: to show qualitative research can be as scientific as quantitative approaches and to build additional bridges over the qualitative-quantitative divide. To achieve these goals, this chapter has examined three different examples of qualitative method. Each of these examples goes well beyond the parameters of a data collection and/or data analysis method, and each is unmistakably qualitative in nature. It is possible to understand how some authors might regard GT, VPA, or TEC as methodological oddities when they are compared to mainstream psychological research practice. The three methods are highly distinct, differ from mainstream psychological research practice, and seemingly from each other. However, the commonalities of, and differences between, these three methods make their examination instructive for the qualitative-quantitative debate.

No qualitative or quantitative method is automatically valid or reliable. It is for researchers to demonstrate that their approach has the ability to bestow scientific warrant for justifying knowledge claims. The analysis of GT, VPA, and TEC has shown all three can adequately meet the criteria of validity and reliability as well as quantitative methods can, several issues notwithstanding (e.g., the need for some form of inter-rater reliability check on the construction of units in TEC). This conclusion is based on an examination of the rigorous and systematic

procedures used in GT, VPA, and TEC, plus the employment of specific procedures to enhance the methods' potential to be valid and reliable (e.g., negative case analysis). This is not to say all three methods do not need to improve their validity and reliability. All three methods are still developing and need to continue to do so in response to the increasing frequency and breadth of their use. Of course, the important proviso here is that the reliability and validity of these methods depends on their correct application.

The artificial divide between qualitative and quantitative approaches can be profitably bridged by GT, VPA, and TEC. Each method crosses many different methodological boundaries. Although predominately understood as qualitative in nature, each method treats quantitative approaches as potentially complementary. If the metatheoretical positions that argue for the inherent differences between qualitative and quantitative research are correct, then these methods would be unable to generate or include quantitative data or procedures. Moreover, VPA is an experimental-based qualitative approach, TEC is qualitative and computational, and GT is primarily qualitative but can allow for quantitative procedures and data. These differences demonstrate that there are many ways to use qualitative methods that make use of 'quantitative' procedures.

Although the three methods do not share a common metatheoretical position, it is plausible to suggest that a realist theme can philosophically underwrite all three. Thagard is a scientific realist (see Thagard, 1988, pp. 145-152). Simon is a realist (Simon, 1991), and Haig's reconstruction of GT is based on scientific realism. Interestingly, Simon, Thagard, and Haig all share a similar preference for casting the process of scientific explanation as problem solving, rather than literal discovery. These authors do not assume that qualitative approaches are unscientific, but instead regard them as useful methods that require rigorous and properly explicated systems to ensure they provide valid and reliable knowledge.

Against a background of the need to be seen as scientifically legitimate, each of the three methods that have been examined has a highly developed methodological and philosophical justification. An information processing theory, a model of verbalization, and a very careful critique of the early use of verbal protocols underpins the application of VPA. GT is an outcome of the interaction between Lazarfeldian quantitative methods and qualitative methods from the Chicago School that specifically aimed to move beyond the use of hypothetico-deduction. TEC and ECHO present the most complete formulation of the inference to the best explanation and its only usable method. Each method of these three methods has negotiated a range of criticisms and continues to prosper. These methods contrast with to other qualitative methods that are potentially very useful and effective methodological procedures but do not as yet have a properly formulated philosophical or even methodological justification. A good example of such a procedure is the focus group approach to research. A considerable amount is known about how to effectively organise and run focus groups, and what information focus groups are good at eliciting. However, there is almost no comment on the warrant of focus group procedures to make scientific claims, or explicit theories as to why the interaction of focus group participants produces useful information. Nor are there any systematic analysis of the methodological weaknesses of focus groups and how they may be overcome. Trout's (1998) study of narrative methods provides strong evidence that qualitative methods like this are highly prone to unreliability and bias. This chapter has shown how three qualitative methods have made detailed and rigorous claims for the scientific nature of their approaches. These methods can be contrasted with other qualitative methods that have yet to properly consider the need to address these important issues.

Chapter Six

Social Constructionism

> Rather than closing psychology's laboratory doors on the storms that rage around it, there is a greater strength to be gained through constructive dialogue. I have tried to demonstrate here that with judicious and careful sifting of the arguments, a far richer and more effective psychology may emerge than has ever been known. This will be a psychology replete with conceptual resources, sensitive to ideology and history, innovative in its methods of inquiry – a continuing font of new and effective practices. It will be a psychology in which colonialist universalism is replaced by a global conversation among equals. (Gergen, 2001a, pp. 811-812)

> [T]here has been a scandalized outrage about social constructivism going well beyond normal intellectual disagreement. For example, Mario Bunge has described most of the work in the field as a "grotesque cartoon of scientific research"...David Stove has written of these doctrines as a form of lunacy which is "so absurd, that is eludes the force of all argument"...Larry Laudan has characterized [social constructivism's] "rampant relativism" as "the most prominent and pernicious manifestation of anti-intellectualism in our time". (Slezak, 2000, p. 92)

6.1 Overview of chapters six and seven

A key aim of this thesis is to argue for a scientifically sound and progressive postempiricist metatheoretical basis for qualitative research in psychology. Scientifically 'sound' refers to the ability of the proposed combination of metatheory, methodology, and method to provide qualitative research with a credible warrant for its knowledge claims and to promote rigorous and systematic research which strives for the 'truth'. 'Progressive' refers to the ability of the

proposed metatheory to adapt to the widespread criticisms of empiricism and allow for social influences on the participants and the researchers, the role of language in the construction of knowledge, and to consider the political implications of the research. In chapter five, examples of qualitative method were argued to be 'methodologically' scientific but they were not accompanied with an explicit postempiricist metatheory. This chapter examines social constructionism[61], which is the most popular metatheory employed in qualitative psychology. In particular, Kenneth Gergen's (e.g., Gergen, 1985), influential form of social constructionism will be considered. An alternative metatheory for qualitative research in psychology is set out in chapter seven. It comprises a specific type of scientific realism that is informed by Hooker (1987), Phillips (2000), and Haig (1996, 2002b).

Social constructionism is one of a number of influences that has helped to facilitate the placing of a greater emphasis on the social context of research and the social and linguistic influences on the construction of knowledge. However, this thesis argues that radical social constructionism, and Gergen's form of radical social constructionism in particular, does not ensure qualitative research has a scientific warrant for knowledge claims. Gergen's (1985, 1994a) social constructionism does not endorse the search for 'truth', and claims that scientific values such as rigour are irrelevant goals in research. Alternatively, scientific realism can heed the importance of social influences and provide a scientific warrant for qualitative research to justify its knowledge claims. In addition, scientific realism accepts that 'truth' cannot be established, indeed that all knowledge is fallible, but that truth can be gauged indirectly by the use of the appropriate evaluative criteria for knowledge claims.

The aim in the following two chapters is not to reject one metatheory in favour of the other, but to seek a position that accommodates what is best in social

[61] Following Gergen, the term 'construct*ionism*' is preferred to 'construct*ivism*'. However, either word is accepted in the various literatures in which these terms appear.

constructionism and scientific realism. However, a scientific realist approach does emerge as the dominant partner, and Gergen's form of radical social constructionism is largely rejected. It should be noted that the aim of developing a realist-constructionist 'hybrid' has attracted a few realists and social constructionists (Beck, 1996; Delanty, 1997; Gergen, 1998, 2001c; Hammersley, 1996; Seale, 1999b; Sismondo, 1996). The comparison and evaluation of the advantages of social constructionism and scientific realism requires the elaboration of how these metatheories view the nature of research and its relation to the world. In this chapter, social constructionism is examined.

6.2 Overview of social constructionism

In social science, constructionism's influence on researchers has been likened to a secular religion (Phillips, 2000, p. 1). One type of constructionism, social constructionism, appears rapidly to have become the dominant metatheoretical view held by qualitative researchers. Qualitative researchers are often assumed to adhere to a social constructionist ontology and epistemology (e.g., Henwood & Nicholson, 1995). In mainstream psychology, social constructionism has received far greater attention than realism in recent years, although the popularity of social constructionism relative to realism in psychology, and the degree of support in either camp for the use of qualitative methods, are questions for which there are no available empirical answers. The literature on constructionism is dauntingly large, growing with extraordinary speed, and contains a remarkably diverse spectrum of opinions. Constructionism is a very broad church that houses as much scholarly conflict amongst its different sects as it receives from opposing metatheoretical positions. Such is the "sectarianism" within constructionism that to say that a researcher is a constructionist it to reveal little (Phillips, 2000, p. 1). Phillips (2000) explains that the extraordinary conflicts that have arisen around and within constructionism in the last two decades are due to the anticipated potential negative effects of the more radical versions of social constructionism gaining sway. He cautions, "[t]he validity of the traditional philosophical/ epistemological enterprise is effectively undermined, and so

indeed is the pursuit of science itself" (p, 189). Schwandt (2000) characterises qualitative research as a reformist movement against both positivism and quantitative research. In a similar way, radical social constructionism can be seen as a postmodernist-/poststructural-inspired rejection of traditional scientific institutions and epistemology[62]. Even within radical social constructionism, there is disagreement over how reality should be understood and qualitative research should be used.

Constructionism can be very broadly characterised as the view that reality and knowledge are constructed but not discovered. People are continually creating ways to understand their experiences, and are always adapting and refining these approaches in the light of new experiences (Schwandt, 2001). The sociohistorical context is ever present and influential in the construction of knowledge. People are a key part of the sociohistorical context, sharing language and cultural practices, and agreeing or disagreeing with the meanings given to things[63]. In constructionism, reality cannot be pointed to or mirrored in everyday life, or in research. All knowledge is constructed or co-constructed.

Beyond this commonsense characterisation of constructionism, the social constructionist qualitative literature, and the social sciences generally, have considerably more complex and extreme understandings of constructionism. It is still possible, however, to divide the thinking on constructionism in the qualitative literature and the social sciences into two main factions, although there are still considerable differences within these groups. These two groups are psychological constructionism and social constructionism[64] (Phillips, 2000;

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[62] The 'paradigm wars' discussed in the qualitative-quantitative debate can be seen as one part of the broader 'science wars' between constructionists and opposing metatheoretical positions.

[63] This commonsense view of constructionism is also known as 'perspectivism' (see Fay, 1996).

[64] Alternative classifications of social constructionism include 'light' and 'dark' social constructionism (Danziger, 1997), and 'macro' and 'micro' social constructionism (Burr, 2003). Light social constructionists positively emphasise the diversity of peoples' constructions, whereas dark constructionists focus on the power relations that stem from discourse (Danziger, 1997). Macro social constructionists focus on "the constructive force of culturally available discourses,

Schwandt, 2001). Psychological constructionism (which is very similar to 'radical' constructionism, e.g., von Glaserfeld, 1995, Steffe & Thompson, 2000; but should not to be confused with radical *social* constructionism) can be characterised as focusing on the inner construction of reality through individual cognition or "on how individuals learn" (Phillips, 2000, p. 6). Psychological constructionism denies it is possible to achieve an accurate representation of an external reality (Schwandt, 2001). The individual knower is perpetually developing his or her cognitions about 'reality'. The individual never discovers knowledge but constructs it from his or her 'internal' cognitions. Alternatively, social constructionism stresses that knowledge is created by social processes and interactions. The distinction Phillips (2000) makes between psychological constructionism and social constructionism is that the former emphasises the individual as the "creator" of knowledge, and the latter focuses on "the construction of the public bodies of knowledge" (p. 7), that is, knowledge is created through social interchange (Gergen. 1985). Social constructionism can be further divided into a 'strong' version (sometimes known as the 'strong programme', see Bloor, 1981), and a 'weak' version (Schwandt, 2000). The strong version of social constructionism can deny any reality at all (e.g., Gergen, 1994a). The weak version does not deny reality and tends to focus on highlighting the role of social construction and its influence on how the world is perceived (Schwandt, 2000, 2001).

This chapter will focus on the prominent strong version of social constructionism as set out by Kenneth Gergen (1973, 1978, 1985, 1992a & b, 1994a, b & c, 1999, 2001a, b, & c), and in relation to this, the view of qualitative inquiry by Kenneth Gergen and Mary Gergen (M. Gergen, 1992; Gergen & Gergen, 1983, 1984, 1986, 1991, 2000; M. Gergen, Chrisler & LoCicero, 1999). Gergen's radical social constructionism is one metatheory with the potential to underpin qualitative research in psychology. The writing of other social constructionist

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and the power relations embedded within these" (Burr, 2003, p. 203), and micro social constructionists focus on "the construction of accounts and personal identities within interpersonal interactions" (Burr, 2003, p. 203).

authors will also be noted where relevant (e.g., Denzin, 1997), but the main foci are the metatheoretical writings of Kenneth Gergen, and the methodologically oriented writings of Kenneth Gergen and Mary Gergen. The strong version of social constructionism is preferred as the subject of this analysis because the weak version generally subscribes to little that scientific realism would normally challenge (Phillips, 2000), and psychological, or radical, constructionism have been comprehensively challenged by others (e.g., McCarty & Schwandt, 2000; Nola, 2003; Slezak, 2000). Gergen's metatheory is selected for examination because he provides a consistent body of scholarship on social constructionism, writes primarily for a psychological audience, and, typically with Mary Gergen, applies his radical social constructionism specifically to qualitative research in psychology.

Chapter six therefore has three aims: first, to provide an accurate characterisation of Gergen's radical social constructionism, second, to establish how Gergen and Gergen apply this metatheory to guide qualitative research, and third, to highlight the strengths and weaknesses of this social constructionist position.

6.3 Gergen's radical social constructionism

Social constructionism in psychology has a multitude of origins, including symbolic interactionism, ethnomethodology, critical theory (e.g., Marxism), and more recently postmodernism and poststructuralism. These influences have continued to develop separately as well as coalesce into what can broadly be called 'social constructionism'. For example, symbolic interactionism's influence on social constructionism is not difficult to discern, because it argues that the meanings of objects, people, and their identities are formed through social interaction (Blumer, 1969; Denzin, 1992). Berger and Luckmann (1966) arguably made the most important contribution to the early development of social constructionism with their book "The Social Construction of Reality" (Gergen, 1985). In this work, Berger and Luckmann argue that people create and sustain

all social phenomena through the processes of externalisation, objectivation, and internalisation. Externalisation occurs when people create a new social practice or idea by talking or writing about it. This discussion becomes part of social life, and the social practice then 'lives'. Objectivation means the social practice has become an objective part of the world, and is no longer dependent on the social relations of people to sustain it. The social practice or idea is understood as a normal part of the world by future generations and therefore has become internalised (Burr, 1995). For example, social constructionism has been externalised by Berger and Luckmann, among many others, and is now an 'object' to many social scientists. Berger and Luckman's (1966) position is still attractive to some current social constructionists because it maintains an objective relationship with reality (e.g., Burr, 2003).

It was with this background that Gergen's writing on social constructionism in psychology began over thirty years ago. Gergen's view of social constructionism developed under a number of influences, although more latterly it has been heavily influenced by postmodernism and poststructuralism[65]. Indeed, Gergen has come to believe social constructionism is a result of postmodernist thinking and that the rise of qualitative methodology is also a positive effect of postmodernism (Gergen, 2001a). The development of Gergen's social constructionism begins with Gergen's (1973) paper "Social psychology and history". In this article, Gergen argues that knowledge is a product of social, historical, political, economic, and cultural influences. For him, the individual should not be the focus of psychological study because these broader influences provide a better understanding of social life. What is more, social life is constantly changing, and therefore psychology needs to act as a form of historical analysis. This viewpoint is reinforced in Gergen (1982) where he rejects endogenic (rationalist) and exogenic (empiricist) epistemological perspectives in psychology and argues for an epistemology grounded in social

[65] Although, Gergen and Gergen (2000) claim that we are in a post-postmodern and post-poststructural era where reconstruction, not deconstruction, has become the focus.

relations (also see Gergen, 1994c). Empiricism is understood to protect a host of methodologically and politically retrograde elements (e.g., treating participants as objects[66], assuming an objective, 'god's eye view' of research, and viewing the self as mechanistic) and does not allow for the role of language or social relations in the construction of knowledge (Gergen, 1992b). Gergen also sees the alternative realist-oriented metatheory proposed by Manicas and Secord (1983) as sharing the same problems of empiricism, and this too is rejected (see Gergen, 1985, footnote 3, p. 272). Gergen has also specifically rejected scientific realism (Gergen, 1994a, pp. 75-76). Gergen (1994a) refers to Manicas and Secord, Greenwood, Harré, and Bhaskar as 'transcendental' realists, which illustrates Gergen's somewhat loose understanding of the different forms of realism. Manicas and Secord (1983), Greenwood (1992), and Harré (1986) are scientific realists, but they have different interpretations of scientific realism. Bhaskar (1989) is better known as a 'critical' realist, although he could be, and often is, labelled a scientific realist. Recently, however, Gergen has offered a conciliatory understanding of the role of realism, and of the potential of social constructionism and realism to work in a more collaborative, less annihilistic manner (see Gergen, 1998, 2001c). This conciliation is explored later in this chapter. However, Gergen is still highly critical of any foundationalist stance[67], because he does not accept that researchers can report reality with any clarity or degree of certainty (McCarty & Schwandt, 2000). This rejection of foundationalism is widely accepted by scientific realists in favour of non-foundationalist forms of justifying knowledge claims (Greenwood, 1991).

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[66] Gergen specifically rejects the subject-object dualism of thinkers (subject) and what the thinkers think about (object). Subject-object dualism is strongly criticised in the qualitative literature, which generally prefers the reflexive view that subjects can be the objects of thought (Schwandt, 2001). Gergen would argue that the subject is never separate from the objects they think about.

[67] Foundationalism is the belief that there is a foundation that all knowledge and truth are based on. Foundationalists' believe that there is absolute truth or a real world that we do not construct and that it is possible to know anything rationally. Foundationalism is usually associated with empiricist or rationalist epistemologies.

Gergen (1973, 1985, 1994a & c) sets out a mandate for social constructionism in psychology as an alternative to empiricism. He advances many reasons for supporting his form of social constructionism, but two of these are central. First, social constructionism represents a combination of four contemporary critiques of the practices and metatheory of social science and psychology. These are the demonstration of the impact of social influences on the production of knowledge, for example, such studies such as Knorr-Cetina & Mulkay (1983[68]), the highly influential role of language as expressed by postmodern and poststructural writers, where all is text or discourse and reality can only ever be a rhetorical creation (see Rorty, 1982)[69], an emphasis on the political nature of research and metatheory promoted by critical theory, in particular, Marxism and feminism, and critiques of mainstream psychology by psychological researchers (e.g., Bruner, 1990; Danziger, 1990; Koch, 1985; see Misra, 1993 for a brief overview of these critiques) (McCarty & Schwandt, 2000). Gergen is seeking to directly challenge the relevance of psychology's existing 'individualistic' epistemological stance and replace it with a social epistemology. Second, Gergen's social constructionism promises to democratise and reconstruct the social sciences through new practices and a new participative understanding of reality (McCarty & Schwandt, 2000). Gergen (1985, 1994a & c) therefore sets out clear political and methodological agendas for his radical social constructionism.

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[68] The social constructionist viewpoint has been applied to the study of scientific conduct. The focus of such research is to show that facts are the products of social processes within the 'laboratory'. Much research has been undertaken to demonstrate that experimentation conducted in laboratory settings is as prone to bias as any other form of research (e.g., Knorr-Cetina & Mulkay, 1983; Mulkay, 1979), although one noted example of this research (i.e., Latour & Woolgar, 1979) has been shown to be far from rigorous and highly questionable as a piece of scientific investigation (see Phillips, 2000; Slezak, 1994, 2000). This matter is discussed in detail in chapter seven.

[69] It is important to note that Gergen (1989) characterises discourse or text not as descriptive but 'performative', that is, it performs social functions, including for example supporting and rejecting ideas (Greenwood, 1992, p. 139).

6.3.1 Four assumptions of Gergen's radical social constructionism

Knowledge is socially constructed

Four overlapping assumptions that underpin Gergen's radical social constructionism need to be closely considered in characterising his position. These metatheoretical assumptions are to be found in Gergen (1985, 1994a, b & c, 1999, 2001a, b & c), but can be offered ideas that most followers of a strong form of social constructionism would agree with.

Gergen (1985) rejects the idea that knowledge can be discovered because he believes there is no determinable nature to the world[70]. Moreover, knowledge cannot be induced or deduced from the world. Gergen argues that people construct their own versions of knowledge through their social relations in the world. Therefore, in social constructionism, knowledge cannot be independent of the mind[71], and the existence of latent variables or theoretical entities (e.g., mental states) are denied. It is "the vicissitudes of social processes (e.g., communication, negotiation, conflict, rhetoric)" that create knowledge (Gergen, 1985, p. 268). The concept of validity is seen as a changeable social construct and prone to the vagaries of historical development and cultural variation. Therefore, knowledge claims cannot be justified for they are based on changeable concepts operating in dynamic social settings.

Social constructionists focus on social relations, in particular the nature of language as the main conduit for creating knowledge. As people grow up, they are socialised into a set of cultural rules expressed by language. Therefore, the basis of categorisation and meaning has already been established in language. In Gergen's (1985, 1994a) radical social constructionism, there is no objective understanding of a material world, just a socially constructed understanding of

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[70] In this sense, Gergen's radical social constructionism is antiessentialist. He does not believe there are 'essences' in the world, including people, to be discovered.

[71] Mind-independence, that is the view that entities can exist independently of observing them, is a key tenet of most forms of scientific realism (often known as metaphysical realism). Gergen's emphasis on mind-dependence means he is an antirealist.

the world. Ultimately, the nature of 'truth' will depend on the relevant cultural, historical, and linguistic context (Gergen, 1985), although Gergen does not wish to burden his understanding of social construction with an explicit ontology (Gergen, 1994a). Gergen argues that his form of social constructionism is "ontologically mute" (Gergen, 1994a, p. 72)[72], where knowledge stems from collective understandings within linguistic communities. The realist notion of truth as correspondence between language and the world is rejected.

All knowledge is embedded in culture and history

Gergen (1973, 1994c) asserts that knowledge of the world is always specific to a cultural and historical setting, which means that facts are constantly changing as cultures change. The concepts people use in the world are socially constructed depending on their history and current cultural context. For example, the understanding of tennis in 12th century France (when it was known as 'jeu de paume' and later 'tenez') involved a quadrangle inside a castle where the tennis players used their hands to strike the ball (Collins, 1997). In 21st century Australia, tennis players use rackets, play on grass, and even advertise toilet paper. The meaning of 'tennis' is understood to be relative and specific to cultures and periods in history. The concept of 'tennis' is therefore a product of language, culture, and history. The same argument can be applied to psychological constructs such as the concepts of romantic love (Averill, 1985), or the self (Verhave & van Hoorne, 1984). Unlike tennis, the psychological constructs do not materially change, but appear dependent on their cultural and historical context for their changing construction. Gergen (1985) considers such concepts social 'artifacts' that are "products of historically situated interchanges among people" (p. 267). Psychological concepts are also understood to vary across cultures. For example, the notion of 'self' in Western cultures is different from how the Maori have traditionally seen the 'self' (Smith, 1981).

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[72] Gergen shares this view of ontology with Potter (1996) and Denzin (1997), who also argue that reality resides in social relations and discourse.

Gergen's (1973, 1994c) view that psychological phenomena are always changing due to historical and cultural relativism has been strongly challenged by Gage (1996). Gage (1996) demonstrates that through the widespread application of meta-analysis[73], psychological studies regularly provide stable main and interaction effects. Although Gergen (1994c) challenges the accuracy of meta-analysis, the extensive use of the method has shown it to be highly effective (Meehl, 1991). It is likely that some phenomena are more durable and others less so, but Gage (1996) shows that phenomena are not created solely by theorists influenced by their particular time in history and social influences, and they are certainly more stable than Gergen takes them to be. A problem for Gergen here is that he does not distinguish between phenomena and data. Data are 'lower level' pieces of information that do not involve inferences and are idiosyncratic to time and place. Data are collected and analysed to form claims about phenomena which are stable and recurrent patterns. Data will change, but phenomena are relatively stable (Woodward, 1989).

Gergen (1985) goes beyond recognising that cultural and historical influences are important in the construction of knowledge and he argues that researchers can never stand outside their cultures and histories and objectively reflect or map reality. Instead, researchers are directed to investigate how they can account for the multitude of cultural, moral, political, and economic influences on their research and their participants' perspectives. From this point of view, Gergen maintains that what is understood by researchers and their participants cannot be understood normatively as better or worse than what is perceived in other cultures or in other periods of history.

In combination, the first two assumptions - that knowledge is always social constructed and the importance of culture and history - have led to the assertion that Gergen's social constructionism is morally, epistemologically, and

[73] Gage (1996) defines meta-analysis as "the quantitative synthesis of research results across replications" (p. 9).

ontologically relative (e.g., McCarty & Schwandt, 2000). However, just how relative Gergen's social constructionism is cannot be easily ascertained. Misra (1993) asked Gergen about his response to the charge of "extreme" relativism (see pp. 408-409). The response to this question, and taking into account Gergen's other writing on relativism, is somewhat ambiguous. He remains positive about the possibilities that relativism could lead to, supports pluralism, but does not endorse relativism. Gergen does specifically reject the politically damning claim that his social constructionism is morally relative (Gergen, 1994a, pp. 79-82, also pp.111-112), but regularly advances a position that is peppered with relativistic moral or political statements, that he maintains is intended to allow for a range of opposing moralities (Gergen, 1994a). Gergen (1994a) offers more than one defense against the charge of moral relativism. First, he argues that because asserting a single moral ideal inevitably means an alternative moral position is "obliterate[d]" (p. 81), this position, which Gergen strongly associates with empiricism, is unacceptable. So the question is posed, which is the lesser of two evils, moral relativism or a single moral standard? Gergen does not answer this question. Second, Gergen (1994a, p. 58) argues that social constructionism is a "scholarship of dislodgement", that is, it acts to question traditional conventions and facilitate change without a commitment to a specific moral position (McCarty & Schwandt, 2000). Gergen's social constructionism therefore aims to be inclusive of many points of view and disruptive and transformative of any standard view, but Gergen does not offer this position as necessarily supporting relativism. Gergen's (1994a) defense against ontological relativism also utilises both of these arguments (pp. 76-79).

Overall, Gergen supports pluralism rather than relativism. However by not accepting any criteria for knowledge claims, his position can be interpreted as relativistic. Pluralism is a highly desirable feature for science, but unavoidably exists in tension with the need for some form of common understanding of how knowledge claims can be evaluated.

Knowledge compels social action

For Gergen (1985), understandings of knowledge are "negotiated" between people, inevitably leading to many different constructions of the world (p. 268). Knowledge of the social construction of social issues, particularly social problems, are understood to compel, or at least allow for, the possibility of innovative social action by revealing alternative constructions and therefore alternative ways of addressing those constructions. When conducting social constructionist research, the researcher and participants co-construct knowledge. Different research projects will afford the construction of different knowledge, and potentially new constructions may offer those involved new ways to act. A different research interpretation of a social issue can potentially lead to a more efficacious social action. Research, as with any activity, is seen as inherently connected with social activity, and is therefore unavoidably sociopolitical in nature. Gergen (1985) notes, "Descriptions and explanations of the world themselves constitute forms of social action" because they will "serve to sustain and support certain patterns to the exclusion of others" (p. 268). Language can therefore be seen, not as an uninvolved means of expression, but as an unavoidable form of social action. Changes in the way drink-driving, domestic violence, and smoking are now perceived has led, it can be argued, to a more progressive attitude, and more effective social action[74]. In New Zealand, domestic violence was once a low priority for the police, drink-driving was not though to be dangerous, and smoking was fashionable, whereas the perception of these issues is now very different. Gergen would argue that as the understanding of the social constructions of domestic violence, drink-driving, and smoking have changed, opportunities for different social actions to address these problems have arisen.

The emphasis Gergen (1978, 1994c) places on 'generative theory' to support reconstructions of social issues is a key part of the drive for practical social action

[74] Although alternative constructions of social problems can just as easily lead to ineffective social actions.

to be based on research. Typically, Gergen characterises empiricism and realism as data-centric and unconcerned with promoting the construction of generative theory (Gergen, 1978, 1994c). Gergen's social constructionism aims to put theory above data and he advocates that an emphasis be placed on theoretical innovation and pluralism (Gergen, 1994c). Gergen hopes that if psychology can be more theoretically pluralistic and innovative, new ways of addressing old problems will emerge. However, scientific realism can adopt an equally generative understanding of theory (Hooker, 1987). Hooker (1987) conceives theories as "epistemically appropriate risk-utility trade-off structures" (p. 24), which encapsulates Gergen's notion of generative theories, amongst other positions, and allows the scientific realist to understand theories as "expressions of possibility structures" (B. D. Haig, personal communication, October, 7th, 2003).

An active critique of traditional ways of understanding knowledge

Gergen's radical social constructionism is largely based on the rejection of selected metatheories (Gergen, 1998, 2001c). In particular, empiricism and positivism are rejected for their acceptance of the view that knowledge can be objectively acquired from an observable reality without recourse to the influences of history, culture, and ideology (Gergen, 2001c). Social constructionism is characterised as being more suspicious about the world and assumptions that can be made about the world, than these 'two traditional' viewpoints. Gergen (1985) states that, "What we take to be experience of the world does not in itself dictate the terms by which the world is understood" (p. 266). Both induction and hypothetico-deduction are rejected as viable methods for creating knowledge. Gergen contends further that how "taken-for-granted" knowledge has been categorised may not represent 'real' divisions (p. 267). For example, Maori and Pakeha, normal and abnormal, and male and female are categories that social constructionists would strive not to take for granted, and would seek to cross-examine them. Gergen raises the question, "How can theoretical categories be induced or derived from observation...if the process of identifying observational

attributes itself relies on possessing categories?" (p. 266). For Gergen, the traditional empiricist or positivist metatheories do not have adequate answers to these questions and in this view this leaves them without a credible justification for their approaches. In contrast, Gergen emphasises the constraints of language, where everything in the world is discourse or text, and should be researched as such. Gergen (1985) urges us to adopt a strong scepticism about the "taken-for-granted world" (p. 267). In particular, he maintains that knowledge based on 'objective' observation of the world can lead to categorisations that are not 'real' but are just products of ever changing historical and cultural social construction.

Gergen has also rejected realism, but as noted, above he has revised his understanding of this alternative postempiricist metatheory, and recently has begun to moderate his view about it. Although previously highly critical of realism in a general sense (Gergen, 1985), and scientific realism in particular (Gergen, 1994a), Gergen (2001c) seriously considers the necessity of overcoming what he sees as the unproductive science wars between, on the one side constructionism, and on the other, realism even though he perceives the realists and constructionists as "inherently incommensurable" (p. 14). His focus is on the potential of realism and constructionism to work together in some fashion. The option of "divid[ing] ourselves into fragmented, hostile and self-satisfied enclaves" is rejected (Gergen, 2001c, p. 13), although this is a fair description of the current state of affairs in the science wars. Gergen (2001c) argues that the retreat into enclaves

> [U]ltimately deadens those within the contentious enclaves. Because this option thrives on separation – on processes of solipsistic self-gratification – there is little means of resolving conflict, no catalytic confrontation that might press the issues forward or offer new insights and potentials. (pp. 13-14)

Gergen (2001c) is equally pessimistic that the traditional academic process of "argumentative confrontation" will lead to a positive resolution of the science wars (p. 14). Gergen wishes to avoid the demise of either position by searching for common ground. For example, in the commonsense uses of realism and constructionism, he contends a common understanding of each side's position is not hard to find. If alerted to an oncoming lorry careening wildly, with the driver visibly incapacitated, and goods afire, most constructionists and realists would be comfortable following a realist framework and not wish to pause and challenge the nature of this reality as a debatable construction. Similarly, the infamous Auchtermuchty joke, "have you heard about the magic tractor? It went down the lane and turned into a field", would have realists and constructionists alike muttering about the localised nature of wit in rural Scotland.

As Gergen (1998, 2001c) also argues, realists and constructionists frequently use the other side's arguments to further their critiques. For example, realists can point to the material nature of the evidence used by researchers such as Knorr-Cetina and Mulkay (1983) as indicating a connection with the material world. Likewise, realists have regularly critiqued constructionism by employing the constructionist argument "that constructionist arguments are themselves constructed" which Gergen (2001c) sees as a form of acceptance of his social constructionist position (p. 17, see also Gergen 1994a, p. 76-77). Gergen (1998, 2001c) now proposes that there is in fact an important role for both realism and constructionism in research and the world. Realism offers "unity and solidarity", whereas constructionism is "unsettling and creating" (Gergen, 2001c, p. 18). For Gergen both positions become 'discursive resources' for the researcher. Gergen (2001c) concludes by offering four implications of his recent decision to stop criticising realism. First, there should be a shift in the "discursive register" from arguing against realism to reformulating the science wars as the problem to be mutually addressed (p. 19). Second, there should be a separation of realist or constructionist arguments from the people who make these arguments to avoid the "psychological essentializing of evil" (p. 21) and allow for a more productive

discussion (i.e., the focus should be on the arguments, which can be shared, not on specific people or groups). Third, the exploration of the potential of realists and constructionists needs to be polyvocal, that is, both realist and constructionists should aim to express themselves in a multitude of ways and therefore provide more conduits to the identification of commonalities and the engagement of innovative thinking. Fourth, Gergen (2001c) argues that realism and constructionism have become interdependent, and "require each other for intelligibility" (p. 22), otherwise neither could exist.

Gergen's (1998, 2001c) papers, although arguing for détente with realism and offering positive ways to progress that détente, demonstrate very little understanding of realism in any of its forms, and do not offer any substantive comment on how realism and constructionism might 'work together'. This thesis fully supports Gergen's positive approach to seeking a common ground between realism and constructionism, but favours an approach to this discussion that specifically examines how these metatheories can allow for each other or be shown to be compatible. It is in the spirit of this détente that this thesis argues for a scientific realism, augmented by aspects of constructionism, to underpin qualitative inquiry in psychology and aid movement beyond the science wars. Kenneth Gergen and Mary Gergen's belief that qualitative researchers can take progressive action in the science wars by following their radical social constructionist metatheory will now be examined.

6.4 Gergen and Gergen's radical social constructionist approach to qualitative research

Kenneth Gergen's radical social constructionist view of the role of qualitative methodology is available in several related papers. These papers typically involve the co-authorship of Mary Gergen (see Gergen & Gergen, 1983, 1984, 1986, 1991, 2000), although there are individual papers relevant to this discussion written by both authors (K. Gergen, 2001a; M. Gergen, 1992; M. Gergen et al., 1999). A great deal of the Gergens' writing can be taken as

relevant to the conduct of qualitative research because of their focus on the unacceptability of empiricism, foundationalism, and their promotion of a social epistemology over an individual epistemology. Gergen and Gergen (1983, 1984, 1986) have also promoted narrative methods as social constructionist qualitative approaches to investigating the self and 'helping relationships'. These papers clearly reflect the four social constructionist metatheoretical assumptions discussed above. In Gergen and Gergen (2000) they specifically set out how their radical social constructionism informs qualitative research. This paper is therefore the main focus of the present analysis, although other papers are considered where relevant.

Gergen and Gergen (2000) are extremely positive about the place of qualitative research within a social constructionist framework. Qualitative inquiry is seen as providing a research process that is potentially more "tolerant and mutually reflexive" of the key influences of language and social relations (p. 1034) than quantitative and empiricist approaches. Gergen and Gergen (2000) believe the current confluence of a number of factors has created a context whereby "qualitative research offers some of the richest and most rewarding exploration available in contemporary social science" (p. 1025). These are: a movement away from empiricism, positivism, and foundationalism; an increased recognition of the link between research and social action; an acceptance of multiple forms of expression for research; the rise of postmodernism and poststructuralism, in particular the emphasis on language as the main conduit to the social construction of the world; and, the understanding that knowledge is culturally and historically situated. The diversity of qualitative approaches, the lack of certainty that qualitative inquiry affords, the rejection of the need for rigour and systematic logic, and the unqualified mixing of methods are all not just accepted, but celebrated. The disunity and conflicts that abound in the qualitative literature are also viewed positively because Gergen and Gergen do not to wish to place any structure on these "tumultuous dialogues" lest they inhibit the "vitality" of qualitative research (p. 1026).

Gergen and Gergen (2000) select three contentious areas of qualitative inquiry in which to apply their social constructionism and examine how it promotes, and is promoted by, qualitative inquiry. These areas are the 'crisis of validity', the rights of representation, and the role of politics in qualitative inquiry. The first two areas are more commonly known as the crises of legitimation and representation (Denzin, 1997; Denzin & Lincoln, 2000; Marcus & Fischer, 1986). Each area will be critically examined in turn.

6.4.1 The 'crisis in validity'

Gergen and Gergen (2000) believe the crisis in validity has arisen through the apparent demonstration that validity is dependent on language and its social context and therefore does not reflect any 'truth' in a material world but only its own linguistic community's construction of 'truth'. In particular, Gergen and Gergen (2000) point to developments in poststructural semiotics, literary theory, and rhetorical theory to demonstrate that language cannot be used to represent the world in an objective manner. Gergen and Gergen see 'truth' and 'falsity' as nothing more than linguistic artifacts (McCarty & Schwandt, 2000). As Gergen and Gergen (2000) express it, "there is no means of matching word to world" (p. 1026). For Gergen and Gergen, therefore, all empiricist or realist warrants for valid knowledge claims are undermined because even socially situated language cannot be made to reflect or map the world. Hence, the criteria and procedures used to promote validity are merely rhetorical devices to convince readers of the research's legitimacy.

Social constructionist qualitative researchers view the crisis in validity as a key problem (Gergen & Gergen, 2000, p. 1026). Gergen and Gergen endeavour to overcome this crisis in good measure through the promotion of social constructionist-oriented qualitative methods. Although there does not seem to be a way of escaping language as the means of expressing research claims, Gergen and Gergen believe social constructionism and qualitative research provide better opportunities and potentialities than empiricism to 'represent' the

world in a way that promotes the acknowledgement of social processes. For them, the use of language is so deleterious to validity that the empiricist, realist[75], and the social constructionist views of science are all put in doubt.

Gergen and Gergen (2000) recognise that this emphasis on language leaves all warrants for knowledge claims in qualitative research in equally precarious positions. It follows that if qualitative researchers cannot use language to express reality, then they have no mandate to suggest their methods should be used instead of quantitative approaches. Qualitative research may focus on the meaning of the language of participants, and language itself, and it can be sensitive to social relations, but this does not avoid the problems of language. For the Gergens, the crisis in validity means they have been 'freed' of the need to be valid in the way quantitative researchers need to be valid, and their focus has moved toward how research can be legitimised, or given authority, through rhetorical devices and political positioning, which may allow a different conception of validity (Denzin, 1997).

Within the qualitative literature, the response to the 'crisis of validity' has been highly varied. There is considerable scepticism about the actual value of moving away from the traditional use of validity. Some qualitative researchers strongly dismiss the overriding power of language as radical social constructionist rhetoric (Clough, 1992; Silverman, 2000). These authors perceive the 'crisis in validity' as a passing phase, or simply a 'socially constructed' issue without substance, and maintain the relevance of validity (e.g., Hammersley, 1996; Morse, 1999b). As argued in this thesis, some believe qualitative research should strive to be valid because validity is still the best available indicator of 'truth' (e.g., Morse et al., 2002), even though all knowledge is regarded as fallible. Both qualitative researchers and quantitative researchers generally understand the need to appreciate and allow for social and personal influences on choices and

[75] In this paper, Gergen and Gergen (2000) do not treat realism as meaningfully different from empiricism.

interpretations in research, and the problems that language can introduce. However, such influences do not provide good reasons for abandoning the traditional scientific values of rigour, logic, and systematic analysis, or to favour qualitative research over quantitative research. Gergen and Gergen (2000), however, see the difficulties of language, and the need to embed research in specific linguistic communities, as offering a greatly expanded role to qualitative inquiry.

In their analysis of the crisis in validity, Gergen and Gergen (2000) reach an impasse. They understand that many qualitative researchers see their criticism of validity as highly detrimental to the promotion of qualitative approaches. They appreciate that the emphasis on the power of language and situated knowledge means qualitative research based on this form of social constructionism does not offer a 'solid' alternative warrant for knowledge claims. Not surprisingly, Gergen and Gergen are positive about this impasse and what they see as the "generative tension" that it creates (p. 1031). Because there is no going back to empiricism, they embrace the possibly useful conflict that has arisen out of the crisis of validity. Ultimately, they do not wish to abandon the idea of validity, but aim to reframe it in order to demonstrate the potential of moving beyond its traditional conception. Gergen and Gergen do not offer a better conception of validity, or clearly specified ways in which researchers may successfully work within the influences of language or situated knowledge without validity. Gergen and Gergen (2000) see their social constructionism as emphasising the ontological complexity of 'discourse' or 'text' as an interrelated mix of many factors including language, social relations, particularly sociopolitical influences, and many other environmental factors[76], and they believe that from this textual soup an understanding of a better form of validity may emerge. This argument has its origins in Rorty's (1982) 'text' metaphor where everything is text, and validity can only be an interpretation acceptable to a specific community of knowledge.

[76] Gergen and Gergen's (2000) argument is based on an email from Frow (April 5, 1998, see Gergen & Gergen, 2000, p. 1031).

Gergen and Gergen (2000) state that they wish to avoid reducing all knowledge to questions of language or social relations and wish to try to generate a different view of validity from the 'everything is text' metaphor. In this argument, they implicitly recognise that relying on language and social relations is a metatheoretical dead-end (Gergen & Gergen, 2000, p. 1031).

Gergen and Gergen (2000) turn to the work of Lather (1991, 1993) as a good example of the potential to reconstruct validity. Lather (1991, 1993) offers as components of her '"transgressive validity checklist" (Lather, 1993, pp. 685-687), ironic validity (which allows for the limits of language and representations when conducting research), paralogical validity (which acts to challenge heterogeneity and foster differences), rhizomatic validity (which aims for local, contextualised understanding, but is also hermeneutic and critical), and voluptuous validity (which embodies several ambiguous extremes that can be applied in research, and, concurrently, combines ethics and epistemology). However, as Lather (1993) argues, transgressive validity is "an incitement to discourse" (p. 673), not an end in itself. She sees these conditions for validity as conditions that simultaneously make validity impossible (p. 687). Her goal is very similar to Gergen and Gergen (2000), that is, to open up other possibilities beyond science by demonstrating the impossibilities currently being practiced in science, in particular the impossibility of conducting research that has traditionally been seen as valid.

Gergen and Gergen (2000) offer four qualitative methodological innovations as the 'fruits' of qualitative researchers' efforts to subvert the concept of validity and therefore allow for its reconstruction. These innovations are reflexivity, multiple voicing, literary representation, and performance. Each of these innovations aims to break down the 'artificial' divisions between the researcher and the participants, and observation and reporting, and promote the social nature of research (Gergen et al., 1999). These innovations are presented and then are critiqued as part of the examination of the 'crisis in validity'.

Reflexivity

As discussed in chapter two, reflexivity is considered to be a key concept in qualitative research. The notion of reflexivity directs researchers to be critically self-aware of their subjective interpretations of all parts of the research process. From a social constructionist viewpoint, reflexivity also emphasises that the researchers should account for the historical, cultural, as well as their personal influences on the research. For Gergen and Gergen (2000), reflexivity extends to include all of the researchers' subjective biases, which are considered as data to be analysed as part of the research. For example, the qualitative method of autoethnography combines the autobiographical study of the researcher's personal history in a given context with the ethnographic study of the same context (see Bochner & Ellis, 2002; Ellis & Bochner, 2000). An autoethnographic study aims to overcome the subject-object dualism by simultaneously addressing the subject (researcher) and object (participants) (Schwandt, 2001). An emphasis on reflexivity is also intended to remove the privileged status of the researcher as one who looks down on the research participants (from 'on high') and from outside the social processes that impact on the participants and the researcher. For Gergen and Gergen, reflexivity can be fully explored in qualitative research, but within the processes and beliefs of empiricism and quantification, they believe only a limited form of reflexivity is possible. According to Gergen and Gergen, the greater access to reflexivity provides qualitative research with a substantial advantage in the appreciation of social and linguistic influences, and an ability to adapt to the dynamic social nature of research.

Multiple voicing

The second methodological innovation Gergen and Gergen (2000) advance in order to reconstruct validity and promote qualitative inquiry is multiple voicing. Multiple voicing seeks to "relativize" the researcher within the research process and the researcher's linguistic context (Gergen & Gergen, 2000, p. 1028). From a social constructionist view, the researcher's voice is only one of many, and therefore this social 'reality' needs to be incorporated into the research. For

Gergen and Gergen, multiple voicing can be promoted by including the participants in any or all of the research processes, and the whole research process can be framed as a co-operative act from initial conception to final reporting. This can even include participants expressing themselves as part of the reporting of the research (Reinharz, 1992). Researchers can also seek divergent opinions to ensure a variety of viewpoints are represented. Here the researcher is directed to avoid forcing the different views that are collected into a coherent, single theme, thus representing the diversity of opinion. Gergen and Gergen (2000) argue that multiple voicing helps to disclaim validity in its traditional sense by promoting the voices of all those relevant to the research as part of the researchers' need to reflect their cultural and historical community.

Literary styling

The third methodological innovation is literary styling. In order to transcend the validity crisis, Gergen and Gergen stress that the reporting of research should move away from traditional, 'falsely' objective reports to forms of reporting or literary styling that best convey the meaning of the research in its linguistic, cultural, and historical context. This view legitimises the use of any approach, including poetry (e.g., Richardson, 1998; Weems, 2003) and fiction (e.g., Davis, 2003; Dunbar, 1999) to represent research findings. This view is intended to signal that any reporting is potentially acceptable because no specific reporting style can provide a more accurate reflection of reality than any other style of reporting. Many qualitative researchers revel in the freedom of expression that literary styling offers, although others perceive literary styling as undermining the credibility of qualitative research as a scientific endeavour (Silverman, 1997).

Performance

The last methodological innovation from Gergen and Gergen (2000) is performance. Performance has the same rationale as literary styling, but moves beyond the written word to the use of drawings, pictures, photographs, drama (Mullen, Diamond, Barone, Mirochnik & Finley, 2000; Pifer, 1999) dance (Ylönen,

2003), and videotaping (Ajwang' & Edmondson, 2003), and any other performance method that is deemed useful by researchers in the reporting of the research (for overviews of performance methods see Carlson, 1996; Denzin, 1997; or Mullen, 2003). Gergen and Gergen (2000) argue that, "The distinction between fact and fiction is largely a matter of textual tradition...[therefore] forms of scientific writing are not the only mode of expression that might be employed" (p. 1029). Using videotaping as a data gathering procedure is common. For example, it is widely used in verbal protocol analysis. Gergen and Gergen see the use of videotaping to report findings as equally useful (see Gergen & Gergen, 1991). Moreover, Gergen and Gergen (2000) suggest that other new performance styles be used as methods for collecting data. They argue that the performance approaches (e.g., dance, drama) will draw in participants not attracted by traditional research involvement and provide a basis for new and difference expressions of participants' experiences. As with all the methodological innovations suggested by Gergen and Gergen, performance clearly moves away from any claims of traditional validity, representation and 'truth' towards focusing on language and social influences in specific contexts.

6.4.2 A critique of the 'crisis in validity' and the methodological innovations

The main criticisms to be made of Gergen and Gergen's (2000) discussion of the crisis in validity are, first, it overlooks how forms of realism have developed to provide alternatives to empiricism, second, it provides no alternative warrant for knowledge claims, third its 'agnostic ontology' is not really agnostic but instead is situated in social relations (McCarty & Schwandt, 2000), and fourth, the methodological innovations cannot plausibly be shown to cohere with Gergen and Gergen's social constructionism.

For Gergen and Gergen there are the options of rejecting validity (and accepting anything goes), returning to empiricism (which is not considered a viable option), or adopting a social constructionist-oriented, but underdeveloped, framing of

validity, which has received its fullest expression with Lather's assorted validities, and is strongly associated with Rorty's textual metaphor. Although Gergen (1998, 2001c) has recently argued for greater dialogue between constructionism and realism, he has yet to consider realist alternatives and how they might adapt to the critiques of validity. For example, Guignon (1991) argues that validity is not made redundant by the recognition of the important influences of language and social relations. Scientific realists generally accept truth can only be approximated, and that it can never be reflected. Under this view, validity can be seen as the most useful indicator of truth but not a constituent of truth (Haig, 2002a). Scientific realists argue that retaining truth as an idealised goal serves to direct the research enterprise whilst accepting that all knowledge is fallible (Haig, 2002a).

The second criticism of Gergen and Gergen's (2000) crisis in validity involves pointing out their failure to offer an alternative system for justifying knowledge claims. In the qualitative literature, much of the criticism of radical social constructionism stems from the judgment that it fiercely attacks existing structures and systems without offering any usable alternative. Lather (1993) offers a typical justification for this aggressive but seemingly nihilistic approach:

> It is my hope that such a disjunctive affirmation of incommensurates has rendered contradictory claims productive in finding a way of putting into play the loss of the possibility of science, and of opening its practice to other possibilities....Such an effort is more about "the changing shape of the thinkable" (Gordon, 1991, p. 8) than it is about the actually existing practices of validity". (p. 687)

Many qualitative practitioners argue that this rejection of any approach to justification leaves them, and radical social constructionism, without a way of justifying knowledge claims. How, therefore, can their own work be judged? How can they judge others' work, or argue their interpretation has merit? How can radical social constructionism make any claims, including the claim that a

system of justification is not warranted? Even if Gergen's criticisms of validity, empiricism, and foundationalism are accepted, this does not mean there is not a need for a system of justification for knowledge claims (McCarty & Schwandt, 2000). Gergen (1994a) argues that the rejection of the current notion of validity is part of the process of seeking superior ways of understanding validity not just rejection for the sake of rejection. The onus is therefore on Gergen and his supporters to provide a superior form of validity.

The third criticism of the crisis of validity leads to the rejection of Gergen's belief that social constructionism is ontologically mute (Gergen, 1994a). Gergen can be interpreted as offering an explicit ontology based on the social interchange of linguistic constructions. Although Gergen (1985, 1994a) consistently works hard to avoid any direct ontological commitments, he is in fact "substituting the metaphysical category of relation for the metaphysical category of substance" (McCarty & Schwandt, 2000, p. 60). Validity might therefore be promoted by those research procedures that were most sensitive to the relevant social processes and linguistic constructions. Alternatively, if Gergen does not in fact have any ontology, or rather, neither accepts nor rejects any ontology, then it becomes difficult to understand how social relations that spring from a world that is indeterminate can be held to be important, or relate to any future form of validity. The claimed disconnection with all ontologies leaves Gergen struggling to provide a rationale for his form of social constructionist research beyond calling for the need to challenge the status quo of research approaches in order that something 'better' may evolve.

Moreover, the methodological innovations explored by Gergen and Gergen (2000) do not offer convincing evidence that social constructionism underpins critical developments in qualitative research, or vice versa, or that these innovations preclude realist interpretations of qualitative research. It is suggested here that these innovations can be incorporated into scientific realism without having to reject the notion of traditional understanding of validity.

Reflexivity is the most important of the four developments, and presents all researchers with a significant challenge, but it does not have to be taken as an aspect of the crisis in validity. Honouring reflexivity does not mean that rigorous, systematic, or logical research, where the researcher strives to limit biases, is misguided. Scientific realism can incorporate reflexivity by appreciating how personal, cultural, and historical factors affect the research. It can do this by adhering to the common scientific realist position that observation is theory-laden, because it is influenced by the researcher's metatheoretical beliefs, prior knowledge, and values. However, with scientific realism, unlike social constructionism, observation does not overwhelm theory construction but interacts with it. As a number of commentators in the qualitative literature have noted, a focus on reflexivity does not necessarily improve the ability of research to better appreciate subjective biases or promote greater equity between the researchers and participants (Parker & Burman, 1993). This thesis maintains that from within a scientific realist framework validity can be profitably applied with a concurrent concern for reflexivity.

The social constructionist enthusiasm for the use of literary styling and performance in research appears to have a number of origins, of which the need of researchers to express themselves beyond the strictures of formal scientific writing seems paramount. There is a convincing argument that participants can more freely and accurately express themselves without the constant and direct involvement of the researcher, particularly if the means of expression are more culturally appropriate, although the data this generates needs to be sensitively managed. The need for the researcher to re-express the participants' views in a particular literary or performance style can be difficult to evaluate because the interpretation the researcher provides is often difficult to discern. Gergen and Gergen (2000) recognise this problem and point to collaborative research between participants and researchers as one positive solution. It is acknowledged that presenting research in interesting styles does potentially attract different audiences, and can make the research accessible to different

groups. Literary and performance styling can also help participants become involved in research. It can also aid the dissemination of research findings but the styles employed need to be carefully monitored to ascertain whose interpretations are being represented, and whose need for creative expression is being fulfilled.

Multiple voicing is a somewhat self-evident suggestion that already has many non-social constructionist manifestations. The main problem with Gergen and Gergen's (2000) promotion of this innovation is that they do not seem to allow for the fact that seeking multiple voices or conflicting opinions does not necessarily improve insight, and may in fact hinder it. Moreover, as Gergen and Gergen note, who is to decide whose views are included, and to what degree? There are situations in qualitative research where seeking the opinions of all the relevant stakeholders, and then comparing their views in conjunction with the other stakeholders are the appropriate foci. Here the idea of multiple voicing is highly relevant but hardly innovative. The evaluation research literature has argued for multiple voicing for over two decades (Patton, 1978), while at the same time placing considerable stress on the need to be systematic, rigorous, fully informed, and impartial when balancing one's own opinions with those of the evaluation stakeholders.

The methodological innovations Gergen and Gergen (2000) discuss do warrant serious consideration and they do lend support the use of qualitative research in some situations. However, these innovations are certainly not the exclusive preserve of social constructionism, and do not serve to reinforce the radical social constructionist argument that validity is in crisis.

6.4.3 The rights of representation

The second contentious area Gergen and Gergen (2000) discuss is the 'rights of representation'. This involves an examination of who has the right to represent others in research. Consideration of the rights of representation are typically

included in debates about the 'crisis of representation' (Clifford & Marcus, 1986; Marcus & Fischer, 1986), which originally challenged the ability of western anthropology to represent non-western cultures. The crisis of representation makes the now widely accepted point that research cannot completely account for experience. More radically, Gergen and Gergen (2000) argue that a direct link between experience and the text of the social world is impossible. They contend that in attempting to explain experience, researchers can only ever misrepresent the world because researchers are constructing the world through their own idiosyncratic language and culturally dependent views. For Gergen and Gergen (2000), psychiatrists and social scientists have long employed labels that disempower those whom these professionals label (see also Burr & Butt, 2000; Gergen, 1999). Gergen and Gergen ask, "To what extent does research convert the commonsense, unscrutinized realities of the culture to disciplinary discourse?" (p. 1034). Research certainly does apply a multitude of labels, many of which have had to be revised or abandoned to reflect the reality of those labelled more accurately. Social research has also challenged the appropriateness of particular labels and strived to promote accurate descriptions of groups. Gergen and Gergen argue that researchers and laypeople cannot be prevented from using labels because this would be as unjust and arbitrary as the use of inaccurate labels. Moreover, if everyone labels in their own fashion, then who has the right to comment authoritatively on others? Because language is a shared enterprise, the use of others' labels and language is inevitable. These questions and concerns are taken by Gergen and Gergen to be starting points from which qualitative approaches can offer progressive developments.

Gergen and Gergen (2000) offer three overlapping qualitative-based research developments to demonstrate how the rights of representation can be approached without recourse to the traditional dependence on politically inequitable representation. These approaches are empowerment research, conjoint representations, and distributed representation.

Empowerment research

Research that aims to empower its participants, where the researchers typically view themselves as flexible resources to be employed by the participants, can be called 'empowerment research'. This type of research is common in community psychology (Rappaport & Seidman, 2000), and evaluation research (Patton, 2002), and has several manifestations in the qualitative literature (e.g., McTaggart, 1997). The best known and most developed version of research that has the empowerment of its participants as its central value is cooperative inquiry (Heron, 1996; Reason, 2003). The values of such approaches are typically said to be: providing participants with the opportunity to set and drive the agenda of the research, generating findings that are closer to the experience of the participants, being more reflective of the participants' 'language', and creating a sense of involvement that makes it more likely participants will act on the research findings. It is claimed that whether the research is actually empowering is not guaranteed, and often co-operative research can reflect the specific agenda of certain participants. Here, the researcher can also face a challenging task in 'facilitating' the use of his or her resources whilst guiding an equitable process within the research.

Conjoint representations

In empowerment research, the researchers offer themselves as 'undirected' resources. Alternatively, in Gergen and Gergen's (2000) approach to conjoint representation, the researchers have a more directive role to play. Conjoint representations focus on ensuring that the researchers and participants work together to collect data, conduct data analysis, and negotiate how the research is represented. The researchers are expected to guide the research process, represent their own experiences within the research, but at the same time place a priority on the experiences of participants (Lather & Smithies, 1997).

Distributed representation

'Distributed representations' is the term Gergen and Gergen give to reporting research in terms of several viewpoints. In order to break down the typical subject-object relationships in research, researchers are encouraged to use a variety of approaches, but some of the most effective involve the blending of multiple viewpoints relating to a relatively discrete issue. For example, Fox (1996) simultaneously reports the viewpoint of a sexually abused child, the abuser's perspective, and her own account of her experiences of being abused in three columns. From this, the reader can investigate each perspective and look to understand how it interrelates with the others.

6.4.4 Critique of the rights of representation

Research that aims to empower, promote collaboration between the researcher and participants, and explore innovative multiple reporting is unquestionably useful, interesting, and could be considered socially progressive. However, it is not unique to social constructionism. Here, Gergen and Gergen are in danger of co-opting concurrent methodological developments that have stemmed from different metatheoretical origins, albeit origins that share many ideas with social constructionism[77]. Moreover, many of the developments cited were in evidence well before the current focus on social contructionism (Harré & Secord, 1972). Nor are such methodological ideas incompatible with a scientific realist position. For example, a scientific realist approach to grounded theory could employ the use of multiple perspectives when eliciting data, reporting findings, and arguing for the validity of the research findings. Again, the researchers and the participants working together on different aspects of the research is compatible with scientific realism. Adopting scientific realism and using empowerment research is a more challenging combination, because it is often participants driving this research process and they are unlikely to have a developed

[77] Notable is Gergen and Gergen's (2000) use of cooperative inquiry as a form of empowerment research. The developers of cooperative inquiry, Heron and Reason, are strong critics of radical social constructionism (see Reason, 1994).

metatheoretical position. From which they can make methodologically informed judgments. However, the developments indicated by Gergen and Gergen do provide a very important reminder that researchers can work more directly with participants to gain greater insight into the participants' lives through an empowering research process.

6.4.5 The role of politics in qualitative inquiry

The third contentious area examined by Gergen and Gergen (2000) is the role of politics in qualitative research. This matter is strongly related to both the crisis in validity and the rights of representation. For Gergen and Gergen (2000, p. 1036), methods cannot be separated from political positions, just as concepts cannot be separated from their linguistic communities. It is generally assumed in radical social constructionism that knowledge is inevitably political and value-laden (Rouse, 1996). Gergen and Gergen argue that methods are inevitably tied to metatheories, which are in turn tied to ideological traditions. It had been previously thought that research could be politically neutral, and more latterly that even if it is accepted that the researchers have political agendas and used research findings to pursue those agendas, their methods were politically neutral instruments. Gergen and Gergen deny this, arguing that every method is embedded in a culture of use and meaning that unavoidably represents a political stance[78]. For them, to use experimentation, for example, dictates that researchers have a certain political understanding of the role of research, and how knowledge is created. Gergen and Gergen (2000) see experimentation as focusing on the individual and making a clear distinction between the researcher (who is in control of the research process) and the object of study (the participant, who has little power). By contrast, Gergen and Gergen assume that qualitative researchers focus on the participants' experience in a way that undermines the distinction between the researcher and the 'object' of study.

[78] A commonly cited idea in this context is Denzin's (2000) argument that "the next moment in qualitative inquiry will be one when the practices of qualitative research finally move, without hesitation or encumbrance from the personal to the political" (p. 261). When this 'moment' occurs, qualitative researchers will no longer focus on personal experiences but on political agendas.

Some qualitative writers understand the acceptance of the inevitability of politics to mean that researchers should pursue research that best furthers their political agendas (e.g., Smith, 1999). Gergen and Gergen (2000) agree, and suggest that, "If science is politics by other means, then we should pursue the inquiry that most effectively achieves our ends" (p. 1036). The key advantage in using qualitative inquiry in this way is the diversity of metatheory and methods that provides qualitative researchers with a wide range of flexible options with which to pursue their political ends. By contrast, quantitative researchers are perceived to be tied to a much narrower range of metatheoretical and methodological options, and therefore are less capable of tailoring research to their political stances.

In the qualitative literature, the role of politics in qualitative research is contentious. Many qualitative researchers do not see research as inevitability political, although it is the majority position. However, many qualitative researchers do not believe that the inevitability of politics in their research provides a mandate to act politically, or to use the research to act politically, in a proactive manner. The perception of the need for political action will typically depend, amongst other things, on the outcome of the research, the views of the participants, and whether it is pragmatic to act politically. It is much more typical of qualitative research in social science to focus on the needs of specific groups, or to work to inform institution-based decision-makers, rather than to specifically set out to act politically through research. A research project might have no obvious political agenda, and while not acting politically may serve to support existing institutions, to insist that researchers must act politically can be regarded as being political for the sake of being political. The radical social constructionist view of Gergen and Gergen (2000) represents the extreme end of the qualitative political spectrum where researchers frequently assert the need to research politically.

How these political battles should be fought is also contentious. Those in qualitative research, who choose to understand any research as an opportunity to further their political agendas, often have different stances, including Marxist, feminist, postmodernist, and viewpoints that represent different ethnic groups. Interestingly, some qualitative researchers have called for a united front based on a specific metatheoretical position for the 'qualitative paradigm'. For example, Denzin and Lincoln (1994) called for a post-Marxist and feminist "poststructural social science project" (p. 579). This is a surprising stance for those who are usually understood to support a relativistic view of metatheory, and a pluralistic orientation toward qualitative research. Moreover, Gergen and Gergen's (2000) rejection of the traditional view of validity without offering any form of replacement, suggests that those who seek to assert the rights of others, or point out deficits in the welfare of certain groups, are merely offering rhetorical arguments. This is deeply unacceptable to many qualitative researchers concerned with inequalities, who now form a critical opposition to radical forms of social constructionism (e.g., Atkinson et al, 2001; Porter, 2002; Reason, 1994).

Again, amidst this conflict over the role of politics in qualitative research, Gergen and Gergen (2000) see a greater potential for the use of qualitative inquiry. They argue that to overcome the partisan conflicts in qualitative research, its researchers need to strive to represent the polyvocality of participants using qualitative methods, and avoid focusing on the monovocal representations of an individual researcher[79]. Polyvocality does not just involve seeking multiple voices but also the multiple opinions Gergen and Gergen believe are present in each of us. Each participant's voice is assumed to contain a range of contradictions and opinions that should not be falsely condensed into a coherent and singular expression. Gergen and Gergen (2000) cite proto-examples of this form of methodology (e.g., Richardson, 1998), although there are now many recent examples of polyvocality (e.g., Gatson, 2003, Richardson, 2003; VanderStaay,

[79] Gergen and Gergen (2000) do not discuss the implications of avoiding individual representation for autoethnography, which is largely based on a monovocal approach.

2003). The implied argument appears to be that if qualitative researchers can appreciate such a diversity of conflicting opinion, then the conflict in qualitative research becomes a virtue.

Gergen and Gergen emphasize the point that the political implications of research is an important issue for researchers. Researchers need to consider the political ramifications of their findings, what their methods reflect about their understanding of people, and how the research affects those people. Researchers also need to be explicit about their metatheoretical beliefs. This does not mean, however, that all research should be used proactively to challenge what is assumed to be a positivist or empiricist-supported status quo in psychological science. In fact, there are a number of problems with this position. First, the radical social constructionist emphasis on the politicization of research overlooks the support that exists for qualitative research amongst postempiricist metatheories for example some versions of scientific realism. Second, the radical social constructionists have yet to provide a plausible and scientifically credible alternative to the metatheories they wish to 'overthrow'. Third, acting politically because every act is understood to be political, and therefore subject to political manipulation, does not serve as a justification for promoting qualitative methods. Qualitative methods are better promoted because they are effective and valid ways of gaining knowledge.

6.5 Conclusions

The main problems with Gergen's radical social constructionism are: first that much of it is based on criticisms of postempiricism that can be effectively countered; second, it does not offer any explicit or convincing alternative to what it believes is unacceptable; and third, radical social constructionism does not offer qualitative research in psychology many advantages that are not to be found elsewhere. Therefore, Gergen's radical social constructionism is rejected in this thesis as a basis for qualitative inquiry in psychology. As has been discussed in this chapter, Gergen goes too far in arguing that his ontology of

social relations successfully excludes other causal forces, in his reactions against empiricism and realism, in the rejection of all form of criteria to justify knowledge claims, and in his, and Mary Gergen's, belief that qualitative research can prosper in the conflict and nihilism that his radical social constructionism appears to support.

This thesis acknowledges that social factors can strongly affect knowledge. However, social factors do not overwhelm other forces of causation (such as the psychological forces of internal causation). Researchers can also act voluntarily even though internal and external forces are influencing them. A view of causation which incorporates internal forces, external forces, voluntary action, and their interaction, would appear more useful than one that just attends to external forces, or internal forces (Phillips, 2000, pp. 206-207). As Phillips (2000) notes, social constructionism runs the risk of presenting a model of human behaviour that removes any sense of human agency. Gergen's (1997) strong rejection of the 'cult of the individual', most particularly in his dismissal of an individual-based epistemology (Gergen, 1985), his emphasis on accepting the self as relational and interdependent on others, and his argument for a de-psychologised account of human behaviour all have the potential effect of moving the agency for behaviour away from people to reside solely in interactions (Phillips, 2000).

Criticism of Gergen's promotion of the 'relational self' is not confined to writers of realist persuasion. Other social constructionists take exception to this apparent disempowerment of the individual and overly strong emphasis on social relations (e.g., Burr, 2003, p. 190-196). In contrast to empiricism, and providing a stance that accommodates many of Gergen's concerns, Hooker (1987) argues that scientific realism properly assumes an anti-anthropocentric position that takes a privileging focus away from humans. He rejects a privileged position in science for humans, but argues that humans do have "special characteristics", although these characteristics exist independently of our claims about them.

Similarly, McCarty and Schwandt (2000) question Gergen's (1985) denial of any ontological commitments, on the grounds that Gergen's view reduces research to the level of studying word play. McCarty and Schwandt endorse the view that there are influential social forces acting on reality. However, they do not believe this understanding prevents researchers from an "interest in how and why we form accounts to explain our actions, and how and why meanings are modified, transformed, and evolve through encounters" (p. 60).

A great deal of Gergen's promotion of his radical social constructionism is based on critiques of empiricism, individualism, and realism. However, there is now a belief expressed by Gergen (1998, 2001a, 2001c), realists, and other social constructionists, that these critiques have gone too far in discarding important beliefs and values about science on the basis of the rejection of outdated metatheoretical ideas. Recently Gergen (1998, 2001c) has sought to move the focus of the relevant debates to a point where both constructionism[80] and realism are seen as different but useful complementary resources for researchers. However, Gergen (1998, 2001c) seems to be motivated by the political need for mutual self-preservation and does not provide any philosophical discussion as to how this constructive détente might occur. This thesis agrees that both constructionism and realism offer valuable metatheoretical and methodological emphases. Kitcher (1993), for example, has identified the unconsidered middle-ground between the overpowering influence of social factors and the focus on empirical knowledge. A scientific realist theory of science offers one middle-way that appreciates the balanced influence of social forces and empirical knowledge.

Moreover, because Gergen rejects all criteria that serve to justify knowledge claims, he creates difficulties for his own aim of improving social conditions. As discussed earlier, Gergen (1994a) argues that judgments of 'right' and 'wrong'

[80] Gergen (2001c) refers only to 'constructionism' and not 'social constructionism' in this paper, presumably to stress the point that all forms of constructionism are being included in his argument.

are always based in perpetually evolving cultural, historical, and linguistic communities. How, therefore, can one evaluate the efforts to frame better conditions if 'right' and 'wrong' conditions are indeterminable (Schwandt, 2000)? If research conclusions lose their force beyond their own narrow contexts, how then can Gergen claim a basis for broadly suggesting the need for democratisation and reconstruction of research? Gergen (1994a) is threatened with the spectre of self-refutation by suggesting that judgments can be usefully made when also arguing that any criteria on which to base judgments are invalid.

Similarly, Gergen and Gergen's application of radical social constructionism to qualitative inquiry, although indicating some innovative developments in the qualitative field, over-states the ability of qualitative research to be the methodological frontline for the postmodern and poststructural agendas of radical social reform. This thesis contends that Gergen's radical social constructionism creates considerably more difficulties for qualitative researchers than solutions. The three crises of validity, representation, and politics in the qualitative literature are largely self-generated and self-sustained by radical social constructionists (Denzin, 1997; Denzin & Lincoln, 1994, 2000; Gergen, 2001a; Gergen & Gergen, 2000). They do not support the view that qualitative research needs to reject realism and strive for the possibility of reconstructing a more textually acceptable metatheory.

Whilst Gergen's radical social constructionism is rejected here, and Gergen and Gergen's application of social constructionism to qualitative inquiry is judged unconvincing, there are several elements in social constructionism that can be usefully retained. These include the acceptance of the influences of history, culture, politics, language, but not the view that these factors determine facts. Social constructionists have also helped create a useful debate on the nature of epistemology and ontology in research (Phillips, 2000). A social constructionist approach which incorporates these influences, but which can also relate to the empirical world, appears a more useful metatheory for qualitative researchers.

For example, Longino's (1990, 1993, 1996) 'contextual empiricism' aims to retain objectivity but also recognises social and political influences on the research process. Longino stresses that for epistemology to be useful, it requires both prescriptive and descriptive elements (Longino, 1993; see also Hooker, 1987, pp. 15-16). Longino can be interpreted as seeking a middle ground that includes elements of what can be broadly labelled constructionism (or postmodernism) and realism, as do a variety of qualitative writers (cf., Hammersley, 1996; Kvale, 1996; Madill et al., 2000; Rennie, 2000; Seale, 1999b).

The form of scientific realism set out in the next chapter rejects Gergen's radical social constructionism but still strives to incorporate the well-founded criticisms of empiricism, while acknowledging the influences of sociality, politics, and language alongside an acceptance of scientific objectivity and validity (Greenwood, 1992). There it will be argued that the metatheoretical basis stemming from the commitments of scientific realism better serve qualitative research in psychology.

Chapter Seven

Scientific Realism

7.1 Overview

The main metascientific options available to psychologists are empiricism, social constructionism, and scientific realism (Greenwood, 1992). Generally, empiricism is no longer considered an acceptable account of science (e.g., Feyerabend, 1975; Harré & Secord, 1972; Kuhn, 1970; although see van Fraassen's 'constructive empiricism', 1984), and for some time now, the focus has been on what to replace it with (Greenwood, 1992). Social constructionism is one alternative. In the previous chapter, it was argued that Gergen's formulation of radical social constructionism (Gergen & Gergen, 2000), is an inadequate metatheory with which to underpin qualitative research in psychology. A less radical form of social constructionism that maintains a strong epistemic relationship with reality appeared more promising (e.g., Longino, 1990, 1993, 1996).

The other major postempiricist metascientific alternative to empiricism is scientific realism. Scientific realism is a broad school of thought with many differing formulations (e.g., Hooker, 1987; Leplin, 1984; Manicas & Secord, 1983), although there is perhaps less overt conflict and sectarianism within scientific realism than within social constructionism. This chapter presents a set of five strongly interrelated doctrines that are central to a credible realist metatheory that can helpfully underpin qualitative research in mainstream psychology. The form of scientific realism to be proposed is based on the writings of Hooker (1987), Phillips (2000), and Haig (1996, 2002a & b) but is also informed by overviews of scientific realism by Boyd (1984, 1996), Greenwood (1987, 1992, 1998), McMullin (1984), and Sankey (2000). An important part of the application of this form of scientific realism to qualitative research in psychology is the adoption of a

general abductive account of scientific method (Haig, 1987, 1996, 2002a & b, 2003; Ward & Haig, 1997; Ward et al., 1999). Within the philosophy of science, there is growing interest and support for abductive method as a more complete, inclusive, and satisfying account of scientific inquiry than hypothetico-deductive or inductive approaches. Haig's (2002b) abductive theory of method provides a promising framework for qualitative inquiry within psychology, and affords a new perspective on some of the outstanding issues in qualitative methodology. In this chapter, the proposed scientific realist doctrines are related to the overall argument for a broader role for qualitative research in psychology. The chapter concludes with an examination of the nature of this role.

7.2 One form of scientific realism

Scientific realism is best characterised as a family of related doctrines (Sankey, 2000). There is no unifying characterisation of scientific realism, and several versions of scientific realism co-exist in the published literature. Moreover, different scientific realists tend to emphasise different combinations of doctrines as central to their preferred theory of science. The number of key tenets in these different expressions of realism also varies. In the version of scientific realism adopted in this thesis, five interrelated tenets are included. Once these doctrines have been briefly introduced below, each will be examined in more detail and related to qualitative inquiry and psychological science.

First, this version of scientific realism is committed to a metaphysical stance that accepts mind-independence as its central tenet. The second claim is for an epistemic realism where objective knowledge can be gained about the world, including the unobserved , while a belief in systematic fallibilism is maintained. The third claim also relates to epistemic realism where a collection of validity criteria are proposed as the best available criteria for justifying knowledge claims. Fourth, this approach to scientific realism adopts a correspondence theory of truth where 'truth' is understood as an important orienting ideal for researchers that at best can only be approximated. Fifth, the thesis that methods are critically

important in science is advanced. Each of these claims is discussed in turn, along with related claims from radical social constructionism, and, when relevant, other metatheoretical positions. The five doctrines are considered central to this brand of scientific realism but they do not represent a comprehensive characterisation of scientific realism. Taken together, however, they are proposed as a coherent if partial account of a metatheory for qualitative research in psychology.

7.2.1 Mind-independence

Arguably, the most central tenet of scientific realism is the metaphysical and ontological commitment to mind-independence (Hooker, 1987; Manicas & Secord, 1983; Sankey, 2000). The thesis of mind-independence maintains that the world and its objects of scientific knowledge exist independently of one's construction of them. However, this is not to claim that how one conceives or theorizes about the world does not have any influence on how the world is experienced, or that social and linguistic relations are not influential in scientific processes (Greenwood, 1992). For both scientists and laypeople, it is useful to presuppose a reality that exists beyond one's construction of the world. The assumption of an independent reality allows the realist to hypothesize theoretical entities that exist beyond one's senses.

With scientific realism, theoretical entities or underlying causal mechanisms, sometimes known as latent variables in psychology, are not directly observable but can, according to the tenet of mind independence, exist in the same sense as the directly observable entities. Psychologists sometimes aim to generate explanatory theories about underlying causal mechanisms in order to explain empirical phenomena. With scientific realism, claims about theoretical entities are treated as genuine attempts to make approximately true claims about reality (Sankey, 2000). Both psychological scientists and qualitative researchers are often explicitly concerned with postulating theoretical entities to explain empirical

phenomena. Indeed, as Hacking (1984) argues, most scientists tend to be realists in the sense of postulating unobserved entities as part of their thinking. An important part of generating theoretical explanations from a scientific realist framework is the view that phenomena are distinct from data (Haig, 2002b, 2003; Woodward, 1989). Phenomena are understood as relatively stable, recurrent features of the world that scientists seek to explain. Data are idiosyncratic, ephemeral pieces of information, which function as observable evidence for phenomena (Haig, 2003).

By contrast, empiricists accept the directly observable, but generally reject the existence of theoretical entities (e.g., Kimble, 1989; van Fraassen, 1984). From a radical social constructionist position, Gergen (1985) argues that theoretical inferences can only provide unintelligible portrayals of an independent reality because there is no way reality can be can compared with how one has described it. Radical social constructionists typically argue that reality is only ever constructed within social interchanges (Gergen, 1985; Latour & Woolgar, 1986). However, scientific realists are not claiming that they can directly describe reality. This debate is taken up in the discussion of the correspondence theory of truth later in this chapter. Suffice it to say, for a scientific realist the quality of a description typically depends on how well it satisfies its truth conditions (Greenwood, 1992).

Both the empiricist and the radical social constructionist metatheories typically do not allow the researcher to hypothesize theoretical entities in order to explain empirical phenomena. The scientific realist doctrine of mind-independence permits the use of theoretical entities and therefore helps to provide a significant explanatory advantage to scientific realism over its metatheoretical rivals. The acceptance of mind-independence also places qualitative researchers in a stronger position to detect and explain phenomena. Grounded theorists benefit from being able first to detect empirical phenomena and then explain them through the postulation of theoretical entities. Mind-independence allows other

qualitative approaches the same opportunity to make inferences and construct theories about unobservable entities in order to explain phenomena. The use of unobservable theoretical entities is a strategy that has proved successful in many areas of psychology and science more generally. Successful claims for their existence are a feature of many successful theories (Hacking, 1984; McMullin, 1984). The radical social constructionist position that all facts are constructed does not allow for the postulation of theoretical entities.

Through its use of theoretical entities based on the belief in a mind-independent world, scientific realism takes a greater 'cognitive risk' than empiricism. Scientific realists are prepared to take this risk in hypothesizing about the unobservable realm in order to be free from the strictures of being confined to the observable realm. The cognitive risk is, however, typically undertaken in the context of rigorously controlled methods, such as grounded theory, verbal protocol analysis, and the theory of explanatory coherence, which are considered in this thesis. The success of science in invoking theoretical entities to explain phenomena supports this realist strategy of taking controlled cognitive risk.

Lastly, one important example of the controlled application of such cognitive risk to qualitative research in psychology is Haig's abductive account of scientific method. The abductive method provides a broader framework for the scientifically credible use of qualitative methods in psychology than both inductivism, which stresses generalization from observational data, and hypothetico-deductivism, which emphasises the empirical testing of theory. The abductive method provides a framework that encompasses the detection of phenomena from data through inductive generalisation, and then the abductive construction of explanatory theory to explain phenomena. In psychology, this typically takes the form of inferring the existence of underlying causal mechanisms from manifest effects. A model or theory of the causal mechanisms can then be developed and evaluated.

The framework provided by the abductive method helps to overcome a number of specific problems within grounded theory (Haig, 1996), which are discussed below. Qualitative research methodology often struggles to characterise how it develops explanatory theory. For example, users of the grounded theory approach have yet to properly elucidate how data is transformed into explanatory theory. A variety of inductive and hypothetico-deductive approaches, or combinations of both, have been forwarded to explain how grounded theorists build their theories, but as discussed in chapter five, these arguments are less than convincing. The exact nature of inductive inference and deductive inference, are not clarified in either the Glaserian or the Straussian versions of grounded theory (Haig, 1996). This leaves a substantial question mark over how grounded theory emerges from data (Dey, 1999, p. 104). According to Haig's (1996) application of the abductive method to grounded theory, data ground phenomena through inductive generalisations, but the explanatory move from phenomena to causal mechanisms or theoretical entities is characterised as abductive. The abductive move accurately characterises the grounded theorist's 'discovery' of key categories, or the core category, that underpins the grounded theory. This abductive framework can incorporate the processes of induction (i.e., inductive generalisations) and hypothetico-deduction where appropriate (i.e., the consequential testing of hypotheses to assess the theory's empirical worth) and allows for the use of abductive reasoning to promote the explanatory power of a theory. The inductive and hypothetico-deductive approaches to causal reasoning in grounded theory do not allow for the intelligent application of the three forms of reasoning, and are therefore severely restricted in scope. The use of the abductive method in grounded theory, and more broadly in qualitative research, is facilitated by the acceptance of the doctrine of mind-independence. This is because of the critical role played in the abductive method by the postulation of the existence of unobservable theoretical entities to explain phenomena.

In conclusion, the mind-independence doctrine supports the employment of unobservable theoretical entities, which can be a highly useful approach to explaining phenomena that is not available under alternative metatheories. The adoption of a metatheory that allows the use of theoretical entities provides qualitative inquiry with a potentially stronger explanatory role in psychological research. In particular, Haig's abductive method provides grounded theory with a promising framework for invoking theoretical entities in a mind-independent world, thus overcoming its current inability to use explanatory reasoning processes.

7.2.2 Epistemic realism and systematic fallibilism

There is less agreement within scientific realist writing about epistemology than about ontology. Epistemic realism has been regarded as an important non-core doctrine of scientific realism by some (e.g., Sankey, 2000), and often it is an implicit part of the characterisation of scientific realism. However, epistemic realism would appear to be vital to scientific realist thinking because it fits closely with a belief in mind-independence and reasoning about theoretical entities. In any case, to be an epistemic realist generally means to accept that objective knowledge can be gained about both observable and unobservable aspects (theoretical entities) of the world. According to epistemic realism, it is possible to have rationally supported beliefs in the approximate truth of claims about theoretical entities. It follows therefore that the best theories can be considered our best guides to reality. The criteria of validity, and their role in the justification of knowledge claims under epistemic realism, are discussed later in this chapter.

Epistemic realism is strongly at odds with the prevailing epistemic beliefs in the literature on qualitative methodology. This literature, presented in chapter two, typically rejects objectivity and appeals to a subjective and often social epistemology grounded in the perspectives of the researcher, the participants, and the socio-political context of both. This thesis argues that the doctrine of epistemic realism is a better alternative to a subjective and social epistemology.

The superiority of an epistemic realist stance follows from its acceptance of objective knowledge of the world, coupled with an attitude of systematic fallibilism toward all knowledge claims. According to fallibilism, there is no privileged knowledge. Knowledge is always uncertain, debatable, open to criticism and revision, and alternative knowledge claims can always be adopted (Hooker, 1987). Moreover, any epistemic realist stance in science needs to allow for the decided limitations of human sensory and cognitive capacities (Hooker, 1987, p. 21). The acceptance of fallibilism means that scientists accept the epistemic limitations of ourselves as knowers but this is not an acceptance that the world is unknowable or that there is no world to be known. Fallibilism accepts that knowledge of the world is never certain. Therefore, cognitively and sensorily limited scientists can strive for corrigible objective knowledge, of mind-independent phenomena, including theoretical entities.

With the form of epistemic realism adopted here, the notion of objective knowledge is troublesome, and requires clarification. 'Objectivity' can have a number of distinct meanings, but it is used here to refer to the ability of the scientist to know things "as they really are" by employing procedures that limit personal bias and other forms of subjectivity. However, it is accepted that no one can ever know things as they really are, because no fail-safe procedures or efforts to be perfectly objective, can be realised. What is emphasised is that scientists strive to be as objective as possible.

Psychological researchers typically stress the need for epistemological objectivity. This thesis argues that the goal of avoiding potentially confounding biases and striving to maintain objectivity is also highly appropriate in qualitative research, even if it is difficult to attain. Phillips (2000) argues that objectivity is a "regulative ideal that underlies all inquiry" (p. 114). That is, objectivity helps us strive for the best possible research, but "does not guarantee truth" (Phillips, 2000, p. 114). The rejection of the worth of objectivity means the acceptance of any standards of inquiry. If a personal or subjective analysis is taken to be on an

epistemic par with an analysis based on extensive and painstaking research, it will undermine the worth of social science (Phillips, 2000, p. 123). Neither objectivity nor subjectivity provides a clear route to the 'truth', but objectivity provides a better standard to follow in aspiring to achieve the 'truth'.

This emphasis on objectivity is not meant as a criticism of current qualitative approaches, some of which can be said to be highly objective in the sense that they employ painstaking validation and reliability procedures, for example, verbal protocol analysis. Rather, it is to stress the virtue of being objective in a qualitative setting. Epistemic realism does not deny that subjectivity plays a role in the production of knowledge, but that objectivity, for the reasons stated, promotes a better and more functional goal for researchers. For example, qualitative researchers who adopt Marxist, feminist, and cooperative paradigm approaches, or indeed all qualitative researchers who aim to identify problems in the world, need some form of epistemic objectivity, otherwise what they are producing can be considered no more than subjective rhetoric.

Radical social constructionists (e.g., Gergen, 1985), who argue that knowledge is always subjectively known and socially constructed, challenge the value of epistemic realism. Latour and Woolgar's (1979, 1986) acclaimed book "Laboratory Life" has been taken by many as providing important support for the radical social constructionist view that scientific knowledge is socially constructed, and it has helped raise new criticisms of scientific realism (Harré, 1986). More recently, however, strong criticisms have been directed against the quality of Latour and Woolgar's study (see Weinert, 1992; Phillips, 2000; Slezak, 1994, 2000). These criticisms support the conclusion that while the construction of scientific facts involves the social interaction of scientists, social interaction is not solely responsible for the production of scientific facts. The production of knowledge also involves, for example, the non-social judgment of individual scientists, and a multitude of objectivity - and rigour-enhancing procedures.

Latour and Woolgar (1979, 1986) appear to have ignored most of the conventions for rigorous ethnographic study, including the rejection of an emic stance. An emic stance is where the researchers becomes an 'insider' through fully involving oneself with the group under study in order to better understand it (this role is otherwise known as participant observation). Latour and Woolgar take an etic stance, which means they stay an 'outsider' to the group under study and therefore relying mainly on observational data. Woolgar (personal communication, October 9th, 2003) explains that this approach was deliberately and "provocatively signalling the attempt to resist adopting the natives' [the scientists'] beliefs". Latour and Woolgar did not even employ the basic qualitative procedure of asking participants to discuss their scientific behaviour, including the intent of their behaviour, which would have provided them with considerably greater insight into both the non-social and social construction of facts. Moreover, they did not place their own interpretation and the participants' interpretation within their appropriate social contexts. Latour and Woolgar (1979) insist that they were avoiding the dangers of an extreme emic approach but still treating the discourse of the participants "as a social phenomenon" (p. 39). This would seem to be a deliberate interpretation of social phenomena without a social context, which is an implausible stance for social constructionists to take. Arguably, the most remarkable and legitimate complaint that can be made against this study was that Woolgar was not there. Woolgar explains: "Bruno did the fieldwork for Lab Life and I visited and we wrote it up together" (Woolgar, personal communication, October 9th, 2003). Only slightly less noteworthy are the points raised by Slezak (1994) that, by Latour's own admission, his English was very poor at the time of the study, that he had no knowledge of experimental science, and that he had yet to encounter any studies in the sociology of science (see Latour & Woolgar, 1986, p. 273). From the position of a qualitative researcher, "Laboratory Life" can be fairly characterised, not as ethnography, but as a somewhat loosely structured observational study that lacks most procedures for ensuring validity checks on the word of Latour. These criticisms raise severe doubts about the validity of the study's support for the view that facts are socially

constructed. Inexplicably, Latour and Woolgar argue that the problems they faced (e.g., a poor grasp of English) were actually advantages because they afforded uniqueness in their perception and interpretation of scientific behaviour. Slezak (1994) concludes that "Laboratory Life" "reads more like a parody than a serious inquiry" (p. 336).

The well-researched work of other sociologists of science (e.g., Knorr-Cetina & Mulkay, 1983; Mulkay, 1979) supports the view that social *and* non-social factors influence the rational decision-making of scientists - for example, factors such as the political agenda of scientists, their personal ambition, or the lure of greater funding. Based on their laboratory studies, Knorr-Cetina and Mulkay (1983) raise two key arguments, which are regularly used against forms of positivism, empiricism, and scientific realism. These arguments stem from the debates about the theses of the theory-ladenness of observation and the underdetermination of theories by data.

The theory-ladenness of observation and the underdetermination of theory by data are each substantial methodological topics in their own right. A full analysis of the debates around these complex areas is not appropriate here; however, each requires a brief characterisation to better assess their specific impact on the credibility of epistemic realism. Although there is considerable controversy as to what the theory-ladenness of observation means, it is reasonable to suggest that it is based in part on the assumption that observation is understood to always be influenced to some degree by prior knowledge, theory, and metatheoretical beliefs. Sociologists of science, such as Knorr-Cetina and Mulkay (1983), use their research to support a strong interpretation of the theory-ladenness of observation thesis. They argue that data is never neutral and that the models and theories that develop from data are accordingly biased and represent the researchers' values, or other sociological influences.

From a broad postempiricist view of science, it is typically accepted that observation should not be given priority over theory but be on a par with theory in terms of its evidentiary worth. This position challenges the logical positivist view that makes a clear distinction between theory and observation, with the epistemic priority being accorded to observation. The logical positivist position is that theoretical terms are dependent for their meaning on the observation on which they are based. As the logical empiricist Feigl (1970) argued, theories grow inductively in the "soil" of observation (Schwandt, 2001, p. 253). More recently, the separation of observation and theory has been challenged by realists and social constructionists, amongst others, both of whom generally accept that both observations and the general production of knowledge are influenced by scientists' existing understandings, the theoretical frameworks being used, and scientists' explicit or implicit metatheoretical positions (Hooker, 1987). Typically, scientific realists argue that theory and observation dynamically interact.

The underdetermination thesis has a number of formulations. Very broadly, however, the argument for the underdetermination of theories by the available evidence supports the view that any given theory lacks sufficient evidence to demonstrate that it is conclusively 'proven' or 'unproven'. However, theories can also be made to fit the available data. Sociologists of science, amongst others, therefore argue that the decision to accept or reject scientific theories depends on sociological factors, not the empirical adequacy of data. However, scientific realists tend to the view that the generation and evaluation of theories is not just an empirical matter, and so are not determined by the data alone. For scientific realists, empirical adequacy is part of the overall epistemic value of a theory, which involves a number of evaluative criteria.

A more justifiable position than the empiricist view that scientific facts are simply discovered, or the social constructionist view that scientific facts are socially constructed, is the understanding that scientific facts are constructed under very specific conditions but these constructions are constrained by multiple influences

from the world. For scientific realism, the knower (e.g., a researcher, or subject) and the known (e.g., the participants or objects) are understood to be causally related. As Hooker (1987) expresses the point, "humans are parts of the world, knowing it through interactions (both within and without them) that permeate it" (p. 6). Facts and theories interact but are always fallible and constrained by the world. Knorr-Cetina and Mulkay are correct in stating that social and political factors influence theory construction and appraisal, but while the influence of these factors will vary depending on the situation, they do not determine facts or theories.

By contrast, radical social constructionists (e.g., Gergen, 1985; Woolgar, 1988a) take the theory-ladenness of observation and the underdetermination of theories by data as strong evidence for a relativist epistemology. They reason that if all data are value-laden, then data depend on the researcher's tacit knowledge, theory, and values. They reason further that the researcher's view is situated within a particular social and linguistic community, and different communities are understood to have different and irreconcilable views. From this they conclude that all knowledge is relative to particular communities and cannot be compared. Stated in its strong form, epistemic relativism holds that all aspects of research need to be tailored to a specific context and the findings of research only apply to that context. Many qualitative writers distance themselves from such relativism (e.g., Schwandt, 2000). Further, relativism is usually rejected by psychologists. For example, Fletcher (1995) describes relativism as self-refuting, whereas Rennie (1999, p. 4) simply calls it "futile".

This thesis adopts an epistemic realism that qualitative researchers can employ in mainstream psychological research – a realism that is consistent with mind-independence, strives for objective knowledge, and can invoke theoretical entities in the construction of explanatory theories to explain phenomena, but accepts a systematic fallibilism at all levels of knowledge and knowledge production. This realist position is considered more consistent with a good deal

of psychological science and more defensible than a radical social constructionist epistemology that potentially accepts any subjective standard, often believes in epistemic relativism, and rejects the appeal to theoretical entities thought to reside in a mind-independent world. It is particularly important that qualitative research reassert its relationship with epistemological objectivity in order to gain credibility in mainstream psychology.

7.2.3 Epistemic criteria for justifying knowledge claims

An important question prompted by the proposed form of epistemic realism is, how are the knowledge claims generated by qualitative research in psychology to be justified? As discussed in chapters two, five, and six, qualitative and radical social constructionist approaches to epistemic appraisal tend to use criteria that deliberately move away from validity and reliability criteria (e.g., Lincoln & Guba's, 1985, 'trustworthiness criteria') or employ rhetorical and aesthetic criteria (e.g., Lather, 1991, 1993). They consistently reject the orthodox approach to validity and reliability that is employed in psychological science.

The search for alternative epistemic criteria to validity and reliability started a process that has led to an "epistemological quagmire" in the qualitative literature (Whittlemore et al., 2001, p. 523). There is now a very wide range of different and opposing positions on the nature and place of the different epistemic criteria within qualitative research (Altheide & Johnson, 1994; Seale, 1999b). However, it is generally accepted in the qualitative literature that the struggle to find appropriate criteria continues, with no particular set of criteria gaining ascendance (Denzin & Lincoln, 2000; Guba & Lincoln, 1994; Seale, 1999b).

This thesis adopts the view that the criteria of reliability and validity are still highly relevant to qualitative research. The use of notions of reliability and validity offers the best way forward for qualitative research in the criteriology debate. It should also help legitimise qualitative research in psychology, and ensure the rigour of qualitative research. However, criteria that need to be used comprise a broader

set of well-accepted validity criteria which includes the following: the 'mainstream' understanding of validity and reliability; validity criteria commonly used to evaluate scientific theories – recall, Kuhn (1977) suggests these are accuracy, consistency, scope, simplicity, and fruitfulness.

The employment of this collection of epistemic criteria is consistent with the position that acceptable scientific research should seek both a reliabilist and coherentist justification for its knowledge claims (Haig, 2003). Reliabilism is the view that a knowledge claim is justified if it has been derived from reliable processes or methods. Verbal protocol analysis is a good example of a qualitative method that typically satisfies a reliabilist approach to justifying knowledge claims because it uses a series of strict procedures to ensure its data is reliable. Alternatively, coherentism argues that a knowledge claim is justified if it coheres with other knowledge claims. Thagard's (1992) theory of explanatory coherence is a qualitative method that makes provision for the assessment of competing theories based on criteria that comprise explanatory coherence. Although reliabilism and coherentism are contrasting approaches to justifying knowledge claims, they can be used in complementary fashion in psychological and qualitative research (Haig, 2003).

The validity criteria that Kuhn suggests are commonly used to evaluate theories, can be briefly characterised as follows: accuracy is the predictive accuracy of the theory; consistency is the requirement that the theory is internally consistent and coheres with other relevant theories; scope is the explanatory breadth of a theory; simplicity brings order to phenomena; and lastly, fruitfulness is the ability of a theory to lead to new ideas in research. Like many broadly acceptable ideas in the philosophy of science, Kuhn's evaluative criteria are rarely mentioned in the qualitative literature. Consequently, Kuhn's full range of criteria are not considered in the debate between the 'traditional' criteria of reliability and validity and the new alternative criteria that abound in qualitative methodology. The criteria of theory evaluation just described constitute a useful set of criteria that

would allow both qualitative and quantitative research to move beyond the traditionally heavy focus on the criterion of empirical adequacy.

The collection of epistemic criteria proposed above is considered better than the many alternative criteria proposed in qualitative research to replace validity and reliability. There are a number of arguments to be noted in support of this position. First, when directly compared, the alternative criteria are not found to be as epistemically strong as the so-called 'traditional' criteria because they can potentially support any and all knowledge claims (Phillips, 2000). Phillips (2000) demonstrates the weakness of the new criteria when he compares 'credibility' (Lincoln & Guba, 1985, p. 301) with 'validity'. As discussed in detail in chapter five, credibility is a weaker concept because of its uncritical acceptance of any research under certain circumstances.

The second argument in support of the proposed epistemic criteria, is that they have not helped resolve the legitimisation crisis in qualitative research (Denzin, 1997), and do not appear to have promoted the use of qualitative research in psychology. For non-realist qualitative researchers, the crisis over how to assess the adequacy of qualitative work is recognised as unresolved with no foreseeable resolution (Angen, 2000; Denzin & Lincoln, 2000; Schwandt, 1996). Qualitative writers have been unable to generate better criteria despite the considerable attention and energy given in the qualitative literature to their development. In the qualitative literature, the need for alternative criteria is driven by the belief that qualitative research fails if evaluated by the 'traditional' validity criteria; that the concepts of validity and reliability are too narrowly operationalised by quantitative procedures to be useful in qualitative research (Altheide & Johnson, 1994). Moreover, the qualitative 'paradigm' is seen as distinct from metatheories, such as positivism, that are presumed to support validity and reliability and therefore are seen to require different evaluative criteria. Consequently, there has been a remarkable proliferation of alternative criteria with which to evaluate knowledge claims made by qualitative researchers, but with no alternative set of criteria

being widely adopted by qualitative researchers (Seale, 1999a), a point that has been noted before. A lingering difficulty here is that qualitative researchers have not been able to explain their inability to address the supposed inappropriateness of the validity and reliability criteria (Banister et al., 1994).

The third argument in favour of the proposed epistemic criteria is that the goal of promoting qualitative research in psychology is best served by returning to the use of the criteria of validity and reliability when assessing the empirical adequacy of knowledge claims (Morse et al., 2002). It is also argued that qualitative research needs to evaluate theory by using the seven criteria noted above, or a set of criteria like them. A concern with validity and reliability, and the specific criteria of accuracy, consistency, scope, simplicity, and fruitfulness are stronger criteria than any alternative criteria proposed for qualitative research. The application of these criteria has the potential to promote the use of qualitative research within psychology because it brings to qualitative research and quantitative research a shared set of evaluation criteria. The proposed use by qualitative researchers of the same criteria and associated terminology as used by mainstream science is to be seen as more than a cosmetic change (Forbes et al., 1999). Sharing the same terminology and the same set of criteria should encourage greater interaction between researchers, and the complementary use of qualitative and quantitative methods, as well as promoting the funding of qualitative research by enhancing its scientific legitimacy (Morse et al., 2002).

Qualitative researchers do face a special challenge in demonstrating to their readership, and themselves, that their conclusions are the result of critical and rigorous investigation, and are not merely anecdotal (Silverman, 2000). However, qualitative research can adhere to the proposed criteria through the use of the multitude of rigorous and systematic procedures that have been developed by qualitative researchers (e.g., constant comparison analysis, negative case analysis, theoretical sampling). When the most systematic and

rigorous qualitative and quantitative methods are compared, it is not easy to discern which is the more rigorous (Azar, 1999).

The proposed scientific realist epistemology therefore argues that the evaluative criteria for justifying knowledge claims centre on validity and reliability. These are empirical adequacy, and the four remaining commonly accepted criteria of theory evaluation identified by Kuhn. Taken together, these criteria can provide qualitative researchers in psychology with a resource that provides a better justification for knowledge claims and theory evaluation than their own word, and which is superior to any alternative set of criteria proposed in the qualitative literature.

7.2.4 The correspondence theory of truth

With its commitment to semantic realism, the form of scientific realism adopted here takes the correspondence theory as its preferred theory of truth. Unlike alternative theories, such as the coherentist and pragmatist theories, the correspondence theory of truth exploits the tenet of mind-independence. The correspondence theory of truth maintains that for a claim about the world to be considered true it must correspond to the relevant facts about the world. That is, a claim about an entity, observable or unobservable, is true only if that entity exists as the theoretical claim states it does. Expressed more formally, the correspondence theory of truth holds that the truth of a proposition 'p' requires the following two conditions to be met. First, p is a fact, and second, the proposition corresponds to that fact. The correspondence theory of truth maintains that truth is a correspondence relation between language and cognition, and the world (Hooker, 1987). Language is understood both to operate within, and constantly refer to, the world.

It is important to emphasise that correspondence truth is to be understood as something that can never be attained, but that it has a critical role as an orienting ideal for researchers to strive for (Phillips, 2000). As Haig (2002a) remarks, truth

"is a highly valued, though unattainable, goal that helps make sense of science as an attempt to represent and intervene in the world" (p. 457). Similarly, McMullin (1984) describes 'truth' as a useful metaphor that offers "an idealized "horizon-claim", which would be quite misleading if applied to the actual work of the scientist" (p. 35).

Gergen (1985, 1994a, 1994c, 2001a) has repeatedly dismissed the view that science should aim to represent the truth. For Gergen and radical social constructionists, language cannot reflect or map the world because the use and meaning of language is situated in specific social contexts. The nature of 'truth' will ultimately depend on the cultural, historical, and linguistic contexts (Gergen, 1985). Gergen and Gergen (2000) see 'truth' and 'falsity' as nothing more than linguistic artifacts (McCarty & Schwandt, 2000). As they express it, "there is no means of matching word to world" (p. 1026). For Gergen and Gergen, therefore, any empiricist or realist warrant for valid knowledge claims is undermined because socially situated language cannot be made to reflect or map the world. Hence, the criteria and procedures used to promote validity are seen as merely rhetorical devices to convince readers of the research's legitimacy. Gergen (1985) offers no alternative truth criteria, but argues that alternative criteria are required that "might reasonably take into account existing needs for systems of intelligibility, limitations inherent in existing constructions, along with a range of political, moral, aesthetic, and practical considerations" (p. 272).

In response to Gergen's rejection of the correspondence theory of truth, Haig (2002a) argues that Gergen inaccurately portrays the scientific realist position on 'truth'. Haig presents three arguments to support a defensible use by realists of the correspondence theory of truth: first, that Gergen conflates the concepts of 'truth' and 'acceptance', second, that Gergen incorrectly argues that correspondence theorists adhere to a mirroring and mapping understanding of correspondence relations, and third, Gergen misunderstands that the correspondence theory of truth can act usefully as a theoretical posit in the broad

scientific realist theory of science. Each of Haig's (2002a) three arguments are considered in turn.

First, Gergen (2001a) does not believe that the correspondence theory of truth provides the evaluative criteria that can justify knowledge claims, although he offers no alternatives beyond asserting the importance of intelligibility rather than objectivity. Haig agrees that correspondence with reality cannot provide criteria for the justification of knowledge claims, but that this does not mean that correspondence theory is useless. Haig argues that what is vital is the distinction between 'truth' and 'acceptance'. 'Truth' cannot be guaranteed through the application of any theory of truth, but serves as a regulative ideal that is important to strive for (Phillips, 2000, p. 184). The ideal of truth, although not achievable as a goal, helps explain why science endeavours to represent the world. Truth is an unattainable ideal that is only accessible indirectly through the criteria employed to evaluate and accept theories. That is, criteria of theory acceptance such as empirical adequacy and coherence are indicative of truth but they are not constitutive of truth (Haig, 2002a, p. 457).

Second, Gergen (2001a) argues that realists support both a mirroring and mapping correspondence relation, when in fact the former is strongly rejected by scientific realists and the latter is considered highly functional. Scientific realists argue that language does not aim to mirror the world because this is impossible, but that the correspondence theory stands in a mapping relation to the world (Haig, 2002a). Mapping serves as a useful metaphor for the approximation of truth that scientific claims actually achieve (Hooker, 1987). Maps provide guidelines, indicators, and rough contours of an actual reality just as science provides an indirect approximation of reality. The mapping metaphor provides insight into the nature of the correspondence relation, and helps to explain how scientists approximate the world (Hooker, 1987).

Finally, Haig argues that the correspondence theory of truth is not only part of semantic realism but is also an important part of a broader framework of cognitive theory (c.f., Hooker, 1987). Viewed in this light, correspondence truth is fundamentally a relation between cognition and the world. In this light, correspondence truth can help explain of why scientists endeavour to represent reality as accurately as possible.

Haig's arguments demonstrate that Gergen's rejection of the correspondence theory is ill-founded. Again, Gergen offers no concrete alternative to the approach he criticises. Qualitative researchers are better served by employing the correspondence theory of truth, which provides them with the guiding ideal of 'truth', but allows them to aim at achieving the acceptance of knowledge claims through the employment of various criteria of validity.

7.2.5 Methodism

Methods are understood to have a central role in the proposed form of scientific realism. Scientific realism, psychology, and qualitative research are all strongly concerned with methods, both for the detection of empirical phenomena and for the generation, development, and evaluation of theories. At a functional level, methods are recognised as playing a vital role in science by ordering and directing inquiry. More importantly, however, almost all knowledge that has been generated by science has come by way of methods, and evolving theories of methods. Science clearly involves many important aspects other than methods, such as aims, presuppositions, theories, and institutions. However, it is a basic commitment of the scientific realist position adopted here that it is through methods scientists have gained most knowledge about substantive areas, theories, and the development and refinement of methods themselves (Haig, 2002a). Without evolving theories of method, it is difficult to see how science would progress.

This thesis accepts the general abductive framework as a useful methodological theory of method (see Haig, 2002b). It provides a framework for the complementarily of quantitative and qualitative approaches to research whilst encouraging methodological pluralism. It also offers a much broader understanding of scientific reasoning than the hypothetico-deductive and inductive methods, which it can usefully subsume. The abductive theory of method provides a holistic conception of method that allows methodologists greater freedom to move between qualitative and quantitative methods. But this general theory of scientific method also offers advantages as discussed in chapters two, five, and earlier in this chapter. For example, the abductive method provides a scientific characterisation of the hitherto unexplained move from phenomena to explanatory theory, which, very helpfully for qualitative researchers, resolves the inexplicable production of a core category in grounded theory (Haig, 1996). Haig's (1996) discussion of problem-solving in the context of grounded theory also places grounded theory on a more credible methodological footing. It is also important to note that what helps grounded theory is also likely to be helpful to the many hybrid qualitative approaches that are derived from grounded theory, or are strongly characterised by components of grounded theory.

Some qualitatively-oriented writers object to what they see as 'methodolatry', that is, the perceived overemphasis on methods in social science, particularly in psychology (e.g., Chamberlain, 2000; Gergen, 1994a; Reicher, 2000). However, qualitative research is deeply involved in the generation and refinement of method, particularly methods of data collection and data analysis. It would be more accurate to characterise the criticisms from qualitative writers as expressions of concern not with the overuse of methods, but the lack of use of qualitative methods in psychology relative to quantitative methods. Gergen, in particular, has challenged the focus on method in psychology. However, in two recent papers (Gergen & Gergen, 2000, and Gergen, 2001a) he strongly advocates qualitative methods as an innovative way forward for psychological

researchers. For example, Gergen and Gergen's (2000) application of their own brand of radical social constructionism to qualitative inquiry, discussed in detail in chapter six, advocates a number of methods, including multiple voicing, literary styling, and performance. By arguing that quantitative methods should be replaced, or at the very least complemented, by qualitative methods, Gergen can be seen as supporting a method-oriented view of science.

An alternative, less method-centred science has not been clearly articulated by critics of methodolatry, and it is difficult to imagine a plausible approach to qualitative research or psychological research generally, where data collection and data analysis methods are assigned a peripheral role. What is more, Gergen's criticisms of the quantitative methods of experimentation and meta-analysis have been effectively countered (e.g., Gage, 1996).

Chapter five demonstrated that qualitative research can be scientific and fit into a scientific realist framework. Moreover, that chapter showed that there are specific qualitative methods that are scientifically credible and valuable in psychological research (namely, grounded theory, verbal protocol analysis, and the theory of explanatory coherence). However, the credibility of these methods highlighted the fact that there are many other qualitative methods that have not shown themselves to be reliable. For example, while narrative methods have become very popular in qualitative research (e.g., Gergen & Gergen, 1984, 1986, 2000), Trout (1998) systematically documents the lack of reliability of narrative methods as used in a variety of different contexts such as, motivational psychology, and social history. Trout's reasoning can readily be generalised to the use of narrative methods in qualitative research generally. Trout argues that narrative methods, by which he means the use of anecdote and subjective judgment of data to make claims of causal dependence without reference to the quantitative parameters of reliability, are epistemically weak. The multiple biases of human perception that have been well established by psychological study

(e.g., confirmation biases[81], the base-rate fallacy[82] and the availability bias[83]) are not allowed for in narrative methods. Trout's (1998) criticisms apply to more qualitative methods than just narrative methods, but as argued in chapter five, the methods of grounded theory, verbal protocol analysis, and the theory of explanatory coherence employ reliability procedures to counter these problems. Importantly, Trout does not aim to dismiss the use of narrative methods outright. He argues that narrative methods have considerable methodological virtue (principally the sensitivity that they have for the close examination of human nature, language, and the methodologically flexibility they can afford; see Fogel, 1982), but he also claims these methods can be weak and misleading, particularly when used in isolation from quantitative approaches. Trout's argument, then, can be taken as another reason to break down the qualitative-quantitative divide, and use qualitative and quantitative methods in a complementary manner.

As discussed in chapter four, both quantitative and qualitative methods are important in science. The artificial barriers between quantitative and qualitative research can be characterised as value positions that tend to support political rather than scientific aims. As detailed in chapter three, the qualitative literature constructs these barriers by providing caricatures of positivist, postpositivist, and realist metatheory (Michell, 2003a) which do not take into account the alternative,

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[81] Trout (1998) notes two forms of confirmation bias. First, the typical understanding of confirmation bias that people interpret information in a way that is consistent with their existing beliefs (Lord, Ross & Lepper, 1979). Second, there is what is sometimes called 'hindsight bias', where people reinterpret their previous beliefs to be consistent with new information (Fischoff, 1975).

[82] It is common for those using narrative methods to support a causal claim about a certain behaviour or event by employing simple frequency data without reference to a base rate for the general population.

[83] The availability bias refers to the well researched phenomenon that people rely most heavily on the information that is most available to them (Tversky & Kahneman, 1973). Whether the information that is most available is the most representative of the relevant issue under study is not generally considered for in the use of narrative methods.

highly developed and different forms of postpositivism. Importantly, scientific realism typically supports methodological pluralism as an appropriate strategy for advancing knowledge. Both qualitative and quantitative methods have a role within scientific realism if they can be shown to be reliable generators of information. Empiricists, however, strongly favour quantitative methods, and tend to reject qualitative methods as pre-scientific, or accord them a highly limited preliminary or adjunctive role in research. Radical social constructionism forcefully rejects the metatheoretical thinking that underpins quantitative approaches, and sometimes rejects quantitative methodology outright.

The analysis of qualitative research in chapters two and four made it clear that there is a pressing need to move beyond the qualitative-quantitative debate and conceive qualitative and quantitative methodologies as allies, not opponents. This need is particularly evident in psychology. The potential role of qualitative methodology in psychology is broadened if it is characterised as generally complementary to quantitative methodology, or if quantitative methodology is characterised as complementary to qualitative methodology. There is considerable evidence to support the view that the metatheoretical and methodological gaps between qualitative and quantitative research are not as large as is normally supposed. These gaps have already been bridged by specific qualitative methods that meet the traditional criteria of research evaluation (e.g., grounded theory, Glaser & Strauss, 1967; verbal protocol analysis, Ericsson & Simon, 1993). The existence of a substantial overlap of qualitative and quantitative methodologies supports the position that qualitative and quantitative research can be used within the same metatheory and as complementary approaches in certain research situations. It should be clear by now that there is more to gain in psychology by breaking down the barriers between qualitative and quantitative research than in maintaining their dubious separation (Greene & Caracelli, 1997).

This is not to say that an informed qualitative-quantitative debate does not still have a useful place in science. As with theories, the advancement of knowledge is aided by generating competing methodologies, which are developed through critical interplay. Social sciences such as anthropology, sociology, and education have generally reached the conclusion that, although many of the key issues in the qualitative-quantitative debate have not been fully resolved, the value of methodological pluralism is more important than the debate itself. Psychology, however, has yet to fully engage with the qualitative-quantitative debate, let alone look beyond it.

7.3 Conclusions: Scientific realism as a framework for qualitative research in psychology

In chapter three it was concluded that, although qualitative research historically lacked a clearly articulated metatheoretical basis for its wider application in psychology, this is no longer the case. There are now several metatheoretical options available to psychologists who wish to employ qualitative methodology. However, none of these metatheories appear broadly acceptable in both mainstream psychology and domains where qualitative research is employed. Qualitative researchers are reluctant to employ what they understand as the mainstream psychological metatheories of positivism, empiricism, and realism as frameworks for their research. The epistemic demands of these metatheories are considered too 'quantitatively' oriented, and symptomatic of a hegemony that does not properly appreciate the social, political, and linguistic influences on science. Psychological scientists tend not to accept qualitative research methods as scientifically credible because these methods are generally understood to be unreliable (Haig, 2002a). In this chapter, a set of scientific realist doctrines was proposed that aims to provide a coherent and usable metatheoretical framework for those wishing to use qualitative research in psychology.

The first of these doctrines is the assumption of a mind-independent world. This doctrine has the advantage of allowing the postulation of theoretical or

unobservable entities based on observed data to detect and explain phenomena, and therefore endeavours to gain an understanding beyond what is simply observable. The use of theoretical entities is a feature of many successful scientific theories (Hacking, 1984; McMullin, 1984), and it is an approach that has provided some success in psychology.

By contrast, the radical social constructionist position advanced by Gergen (1985) denies that any knowledge claims about reality can be established by research because of the "vicissitudes of social processes" (p. 268). McCarty and Schwandt (2000) argue that Gergen's view reduces research to the level of studying word play. McCarty and Schwandt fully support the idea that culture, history, and language are strong influences on reality, but do not accept that this alienates them from an "interest in how and why we form accounts to explain our actions, and how and why meanings are modified, transformed, and evolve through encounters" (p. 60). They charge that by seeing all as text, Gergen's radical social constructionism severs sociality from the world. In a similar vein to Phillips (2000), McCarty and Schwandt (2000) argue that Gergen's (1994a) radical social constructionism in effect removes human agency from the world and from the research process.

In this thesis it is accepted that social forces strongly influence knowledge, but that this acceptance does not lead to the conclusion that social forces have an overwhelming power over the construction of knowledge or the values of science (Phillips, 2000). Non-social or internal forces such as psychological drives (e.g., ambition, intellectual curiosity) can be just as important. Equally, researchers can act voluntarily, based on the beliefs they adhere to, but still be aware of the internal and external forces that are acting upon them (Phillips, 2000). A model of knowledge construction that allows for internal forces, external forces, voluntary action, and their interaction, would seem superior to one that solely focuses on external forces (e.g., Gergen's radical social constructionism) or internal forces (Phillips, 2000, pp. 206-207).

It has been suggested that a significant accompaniment in the proposed acceptance of mind-independence is the employment of the abductive theory of method (Haig, 2002b), which is based on a scientific realist outlook on scientific inquiry. The abductive method facilitates the qualitative researchers' study of theoretical entities (Haig, 1996), allows for the three major forms of scientific inference - induction, abduction, and deduction - and also offers productive solutions to specific problems in grounded theory. To only rely on the radical social constructionist position that all facts are socially constructed bars one from learning about the world in which we live, including its unobserved parts.

Epistemic realism is the second scientific realist doctrine to be proposed. Epistemic realism understands that objective knowledge can be gained about both observable and unobservable aspects of the world. This form of epistemic realism is consistent with mind-independence, strives for objective knowledge, and can employ theoretical entities to construct explanatory theories. It also sees theory and observation in a dynamic relationship, while always accepting a systematic fallibilism at all levels of knowledge and knowledge production. Epistemic realism is considered to be broadly consistent with a good deal of mainstream psychological science and more supportable than a radical social constructionist epistemology that potentially accepts any subjective standard, often believes in epistemic relativism, and rejects the appeal to theoretical entities and a mind-independent world. This epistemic realism is not at odds with qualitative methodology, although it does strongly suggest that qualitative research needs to realign itself with epistemological objectivity.

The third of the proposed scientific realist doctrines is a collection of epistemically realist validity criteria, including: validity and reliability; five standard criteria of theory evaluation: accuracy, consistency, scope, simplicity, and fruitfulness. This collection of validity criteria is suggested because it is believed to be epistemically more robust than any set of alternative criteria offered in the

qualitative literature. The alternative criteria proposed for evaluative research do not apply well to mainstream psychology whereas the use of the 'traditional' criteria can serve to promote qualitative research in psychology, particularly those qualitative methods that have been shown capable of adhering to the demands of validity and reliability (methods that include grounded theory, verbal protocol analysis, and the theory of explanatory coherence). Moreover, the alternative criteria proposed by qualitative methodologists, have not been consistently used in qualitative research. Within the qualitative literature they are generally understood to have failed to address the legitimisation crisis, that is, they do not serve to legitimise knowledge in a postmodern or poststructural sense. What is more, proponents of the alternative criteria cannot explain why these criteria offer a better alternative to knowledge evaluation than traditional validity and reliability considerations. Lastly, the use of the most well known of the alternative criteria, 'credibility' (Lincoln & Guba, 1985), is likely to promote the uncritical acceptance of all knowledge claims, thus seriously casting doubt on its ability to perform useful validation work (Phillips, 2000).

Ironically, the rejection of all types of criteria for the justification of knowledge claims by Gergen threatens his sociopolitical ambitions for improving the lot of people. Gergen (1994a) argues that knowledge stems from social relations and therefore 'good' and 'bad' judgments depend on the constantly changing specific cultural, historical, and linguistic communities around those judgments. However, Gage (1996) convincingly shows phenomena are far more stable than Gergen's judgment allows for. This raises the question of how there can be a comparison and evaluation of conditions to allow improvements to be made in the world if good and bad conditions cannot be determined (Schwandt, 2000). If judgments are invalid outside of very specific contexts, then it seems there can be no basis for democratising and reconstructing research. Gergen (1994a) creates something of a paradox in arguing that a post-criterial world can also make judgments. Specifically, Gergen does not overcome the inability of his radical

social constructionism to justify its knowledge claims beyond the word of the researcher.

The fourth scientific realist doctrine endorses the correspondence theory of truth. Correspondence theory fits considerably better with the doctrine of mind-independence, the use of theoretical entities, and the proposed epistemic realism and its validity criteria, than alternative theories of truth. The correspondence theory of truth maintains that for a claim about the world to be considered true, it must correspond to the facts. In this form, 'truth' is understood as something that can never be attained, but it does have a critical role as an orienting ideal for researchers to strive for (Phillips, 2000). Qualitative researchers are better served employing the correspondence theory of truth, which provides them with an important guiding ideal, but which allows them to employ validity criteria to judge the acceptability of knowledge claims. The arguments in the qualitative literature against the correspondence theory of truth, particularly by Gergen (2001a), are unconvincing because they misrepresent the best scientific realist use of that theory. Haig (2002a) argues that Gergen (2001a) conflates 'truth' and 'acceptance', and unfairly attributes to realists the view that the correspondence relation is a mirroring relation. Again, Gergen offers no constructive alternative to the approach he criticises.

The final doctrine of the proposed form of scientific realism is methodism, or the strong belief in the scientific efficacy of research methods. Methodism maintains that it is through methods that scientists have gained their knowledge about substantive areas as well as methods themselves (Haig, 2002a; Hooker, 1987). This thesis endorses the abductive theory of method as a useful general theory of scientific method (Haig, 2002b). Importantly, the abductive method provides a framework for the complementary understanding and use of both quantitative and qualitative methodologies, and the many methods within those methodologies, but its framework also offers a much broader understanding of scientific reasoning than hypothetico-deductive or inductive methods, which it usefully

subsumes. The abductive theory of method provides a holistic conception of method and more clearly sets out the research process from initial data analysis through phenomena detection to the generation, development, and evaluation of theories (Haig, 2002b).

The use of the abductive method within a scientific realist framework allows the use of either, quantitative or qualitative methods or both, and thereby overcomes a key barrier to preventing the development of a fuller and broader relationship between psychology and qualitative research. The proposed realist framework allows for a carefully considered mix of both qualitative and quantitative methodology, but still adheres to the validity criteria for justifying knowledge claims. Chapter five demonstrated that qualitative methods can generate data in accordance with the methodological commitments of scientific realism. It also established that there are specific qualitative methods that are already scientifically credible and valuable in psychological research. This chapter examined grounded theory, verbal protocol analysis, and the theory of explanatory coherence. However, the credibility of these methods highlights the fact that there are many other qualitative methods that have yet to show themselves to be reliable. A viable alternative to a less method-centred science has not been clearly expressed by critics of methodism, and it is difficult to imagine a productive approach to qualitative methodology, or psychological research more generally, where data, analytic and theory construction methods do not have a prominent place.

It is equally important to conceptualise qualitative methodology as not being implicitly or explicitly opposed to quantitative methodology and its metatheoretical underpinnings. The view that qualitative methodology is better than quantitative methodology is both mistaken and unhelpful, because it obscures the relative strengths of each methodology. Adopting qualitative methods does not automatically solve the problems faced by quantitative methods, and risks overlooking positive metatheoretical and methodological developments made by

quantitative researchers in psychology. The greater employment of qualitative methodology is unlikely to be achieved by attacking psychology's quantitative culture and promoting qualitative methodology as an alternative. The 'quantitative imperative' can be better faced by demonstrating that non-quantitative data can be scientific (Michell, 2003b). This can be achieved by showing that there are examples of qualitative methods that meet the evaluative criteria of validity. This was the strategy adopted in chapter five which examined the methods of grounded theory, verbal protocol analysis, and the theory of explanatory coherence.

Although psychologists have viewed the recent return of qualitative research to psychology with due caution (Haig, 2002a), the form of scientific realism discussed in this chapter addresses psychologists' main concerns about whether qualitative methodology can operate within an acceptable metatheoretical position. It has been suggested that this form of scientific realism includes a scientifically credible ontology, epistemology, theory of truth, and methodology for justifying knowledge claims. It is important to reiterate that only one particular form of scientific realism is being advocated here, and that it relates to a diverse collection of methodological positions and approaches understood as 'qualitative research'.

One indication that qualitative researchers and psychological scientists need not be so far apart in their views of science is that the current gap between the essentially realist metatheory of mainstream psychology and the social constructionist metatheory of much qualitative research is exaggerated by the adoption of incorrect assumptions on both sides (Michell, 2003b). This argument is addressed in chapters two, three, and four. One striking assumption in this regard is the belief that positivism, empiricism, and scientific realism support quantitative, not qualitative, research. At an empirical level, the methodological gap between qualitative and quantitative research has already been bridged by the three qualitative methods of grounded theory, verbal protocol analysis, and

the theory of explanatory coherence. In chapter five it was shown that these methods overcome the assumed inability of qualitative approaches to address the validity criteria for evaluating the worth of scientific knowledge claims.

What also needs to be considered is that the form of scientific realism proposed in this thesis places pressure on qualitative research in psychology to adhere to its ontological and epistemic commitments. Qualitative methods such as verbal protocol analysis and the theory of explanatory coherence can fit into a scientific realist framework without any difficulty because they have been developed and refined by methodologists of a scientific realist persuasion. Verbal protocol analysis is generally used for phenomena detection. Ericsson and Simon (1993) strongly support the empirical gathering of observable data for the fashioning of empirical regularities from which subsequent unobservable, underlying mechanisms can be inferred. They are deeply concerned with meeting the validity criteria for knowledge claims and devote much of the first and revised editions of their texts on protocol analysis to this end.

The relationship between the theory of explanatory coherence and scientific realism is straightforward. Thagard built the theory of explanatory coherence from within a scientific realist metatheory (Thagard, 1988, pp. 145-152). The theory of explanatory coherence is a method of theory construction that functions to evaluate theories, and has been found to be both valid and reliable. Some of the epistemic criteria proposed by this version of scientific realism can be accommodated by the theory of explanatory coherence. Moreover, the theory of explanatory coherence provides a sound embodiment of the coherentist justification of knowledge claims endorsed earlier.

Other qualitative methods, for example, grounded theory, are placed under considerably greater epistemic pressure to conform to the proposed form of scientific realism. One particular pressure relates to how grounded theorists justify their knowledge claims. Specifically, grounded theorists need to

demonstrate that their approaches to data collection, data analysis, and theory construction are valid and reliable. One approach is to use the extensive set of rigour-enhancing procedures (e.g., negative case analysis) set out in chapter five that help the researcher strive for valid and reliable findings without altering grounded theory's powerful analysis procedures. Based on the application of these procedures, it is contended that grounded theory can produce valid and reliable data.

As previously noted, an important part of a credible scientific realist approach to grounded theory in psychology is the abductive account of scientific method (Haig, 1996, 2002b, 2003; Ward & Haig, 1997; Ward et al., 1999). The abductive account of scientific method provides a clear investigative structure that researchers can employ to overcome some of the methodological 'looseness' of the Straussian or Glaserian approaches to grounded theory. Haig (1996) has already provided strong direction to how this may occur with the application of his abductive theory of scientific method. The abductive theory of scientific method is particularly helpful to grounded theory in moving it away from producing a systematic inductive theory in just describes data, or just describes and verifies data, to abductively creating a theory that explains the relevant empirical phenomena. This improvement on the original formulation of grounded theory, considered in chapter five, makes it considerably more useful as a generator of plausible explanatory theories.

Other popular qualitative approaches, such as focus groups, autoethnography, and narrative methods have yet to demonstrate that they provide comprehensive and systematic approaches to justifying their knowledge claims, although it is acknowledged that they are potentially very useful for eliciting insights. It is not known yet whether these methods can be applied in such a way as to meet reliability and validity concerns. Narrative methods have been closely examined by Trout (1998) and found to be highly unreliable. Like most qualitative methods, the focus group method, autoethnography, and narrative methods have generally

grown out of attempts to create data collection methods that suit the participants. The data analysis methods that are then applied could be a mixture of any number of approaches (e.g., the constant comparison method, discourse analysis, conversation analysis, content analysis). Typically, by using videotapes and transcripts of the focus groups, the verbal and non-verbal data are analysed. There are no firm rules or guidelines about which data analysis and data collection methods should be combined in qualitative research. For example, a focus group approach is essentially a data collection method that makes use of any number of data analysis procedures (Wilkinson, 2000, 2003). The potential for biased information in an interactive group context is considerable. However, focus groups can serve to provide a supportive and challenging context that generates very useful information (Basch, 1987; Frith, 2000). The application of the validity procedures set out previously for grounded theory in chapter five could be applied to a focus group approach to increase the validity of its data. Indeed, the abductive account of scientific method could also be used to give scientifically structure to the focus group method. However, neither of these additions, although useful, would address the concern that the focus group method has yet to show that its method of data collection does not simply produce interesting, but biased, information. This contrast with verbal protocol analysis, for example, which has undergone strenuous examination to demonstrate its elicitation of information reliably operates within a valid theoretical framework (Ericsson & Simon, 1984/1993). The focus group approach, although proliferating rapidly in the social sciences (Wilkinson, 2003), has yet to demonstrate such credentials.

Gergen and Gergen's application of radical social constructionism to qualitative inquiry in psychology and elsewhere, although providing some innovative developments for qualitative inquiry, over-states the ability of qualitative research to effectively function at the methodological frontline for the postmodern and poststructural agendas of social reform. Moreover, Gergen does not convincingly indicate why qualitative research should reject realism and strive for

reconstructing a more textually acceptable metatheory. This thesis contends that Gergen's radical social constructionism creates considerably more difficulties for qualitative researchers than solutions, mainly because its supporting arguments are problematic. For example, the three "crises" of validity (or legitimation), representation, and politics in the qualitative literature are largely generated and sustained by radical social constructionists themselves. Denzin (1997; Denzin & Lincoln, 1994, 2000) and Gergen (2001a; Gergen & Gergen, 2000) do not provide solutions, or conduits to potential solutions, to these problems for qualitative researchers. Gergen goes too far in several aspects: in arguing that his ontology of social relations successfully excludes other causal forces, (thus severely limiting human agency), in his ambiguous relationship with relativism, in his overreaction to empiricism and realism, and in the rejection of any form of criteria to justify knowledge claims.

Much of Gergen's argument for radical social constructionism relies on the considerable body of criticism directed at empiricism, individualism, rationalism, and more latterly, scientific realism. Aside from the argument and evidence that realists have reacted constructively to these criticisms, there is a genuine concern from realists, other social constructionists, and now Gergen himself (1998, 2001a, 2001c), that these criticisms have gone too far, and risk "throwing the baby out with the bath water" (Gergen, 2001c, p. 10). Gergen (1998, 2001c) seeks to move beyond what he sees as the unproductive science wars to a point where both constructionism and realism are seen as differing but useful resources for researchers. However, Gergen (1998, 2001c) does not provide any substantial philosophical analysis to underpin how this complementary reconciliation might occur. More generally, Gergen fails to appreciate how realism, and scientific realism in particular, have adapted to the critiques of empiricism. Gergen's argument that realism and constructionism can co-exist is based on a political argument of mutual self-preservation, not a developed view of what each can offer an enriched metatheory.

However, it is accepted by this thesis that a form of social constructionism that acknowledges social influences but advocates some engagement with the empirical world appears a more plausible and applicable metatheory. For example, Longino (1990, 1993, 1996) offers one such approach that can be regarded as a form of 'weaker' social constructionism (Schwandt, 2000). Like a variety of qualitative writers (e.g., Hammersley, 1996; Kvale, 1996; Madill et al., 2000; Rennie, 2000; Seale, 1999b), Longino can be seen as seeking a middle ground that includes elements of what can be broadly labelled 'constructionism' (or 'postmodernism') and 'realism'. Furthermore, a number of authors in a variety of literatures have noted the potential of exploring what lies between realism and constructionism, or realism and relativism, or realism and antirealism (e.g., Kitcher, 1993; Rennie, 2000). This thesis supports the position that the broadly framed, fallibilistic scientific realism presented here can incorporate the role of social influences on knowledge, while maintaining an objective epistemology (Greenwood, 1992). What the present thesis also demonstrates is that the boundaries between different metatheories, methodologies, and methods can, and have been to some extent, profitably bridged to create innovative and insightful ways of understanding the world. This thesis agrees that both social constructionism and realism offer valuable metatheoretical and methodological insights. In particular, social constructionism offers a valuable emphasis on generative theory, the acceptance of the influences of history, culture, politics and language, and it has helped create a useful debate on the nature of epistemology and ontology in research (Phillips, 2000). However, scientific realism can accommodate these positives features of social constructionism. The form of scientific realism proposed in this chapter aims to appreciate the influence of social forces but also retain a strong emphasis on the grounding of empirical knowledge.

In sum, the scientific realist metatheory presented in this chapter is preferred to Gergen's radical social constructionism because it offers a more plausible and resourceful view of methods, methodology, and the relationship between

researchers and the mind-independent and dependent world. It allows for the use of both qualitative and quantitative methodology. It emphasises the importance of criteria of validity and reliability criteria, and therefore places considerably greater epistemic pressure on qualitative methods, ensuring that qualitative research is not just reliant on the word of the researcher. It also allows researchers to maintain an epistemically objective view of the world, but accepts that all knowledge is fallible. A complex and diverse range of influences are assumed to act on the researcher, but this does not exclude the successful pursuit of scientific values and the freedom of the researcher to act voluntarily (Phillips, 2000).

Scientific realism supports the investigation of unobservable, as well as observable, entities, both of which are central to psychological science and important in qualitative research. What is more, the qualitative scientific realist is encouraged to pursue generative and explanatory theories. Particularly promising is the orienting framework of Haig's (1996) abductive account of scientific method which is based on a commitment to scientific realism. This method provides promising solutions to a number of concerns in the ambiguous and unresolved processes of grounded theory. In particular it helps facilitate grounded theory's development of explanatory theories. Both qualitative researchers and psychological scientists would be well served by scientific realism's joint emphasis on phenomena detection and theory construction within an epistemically objective and fallibilistic framework that allows the use of both qualitative and quantitative methods.

Finally, in pursuing the goal of providing qualitative researchers with a scientifically credible metatheory in psychology, this thesis has argued its case with respect to a limited number of qualitative methods. However, the scientific credibility of those methods indicates the potential of qualitative research to contribute considerably more significantly to psychological science than it currently does.

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